GW - 190

GENERAL CORRESPONDENCE

YEAR(S):

1996 - 1995

APPLICATIONS

2 OF 4

STATE OF NEW MEXICO
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P O Box 2088
Santa Fe NM 87501

DISCHARGE PLAN APPLICATION FOR OIL FIELD SERVICE FACILITIES

(Refer to OCD Guidelines for assistance in completing the application.)

I. TYPE: cementing, acidizing and high pressure pumping services for oil and gas wells.

II. OPERATOR: THE WESTERN COMPANY OF NORTH AMERICA

ADDRESS: 2401 Sivley, Artesia NM 88210

CONTACT PERSON: Phillip Box PHONE: 713/629-2861

III. LOCATION: S E / 4, S E / 4, Section 32, Township 16S, Range 26 R

Submit large scale topographic map showing exact location.

IV. Attach the name and address of the landowner of the facility site.

V. Attach a description of the facility with a diagram indicating location of fences, pits, dikes, all tanks on the facility.

VI. Attach a description of all materials stored or used at the facility.

VII. Attach a description of present sources and quantities of effluent and waste solids.

VIII. Attach a description of current liquid and solid waste collection/treatment/disposal systems.

X. Attach a routine inspection, maintenance plan and reporting to ensure permit compliance.

XI. Attach a contingency plan for reporting and clean-up of spills or releases.

XII. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact fresh water.

XIII. Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders.

XIV. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Phillip Box Title: Manager, Real Estate and Facilities Construction

Signature: Phillip Box Date: 4/11/95

DISTRIBUTION: Original and one copy to Santa Fe with one copy to appropriate Division District Office.

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THE WESTERN COMPANY OF NORTH AMERICA
ARTESIA, NEW MEXICO FACILITY

DISCHARGE PLAN
APPLICATION FOR
OIL FIELD SERVICE FACILITIES

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SECTIONS I, II, III & IV

I TYPE OF OPERATION

The Western Company of North America, Artesia, New Mexico District provides cementing, acidizing and high pressure pumping services for oil and gas wells.

II OPERATOR: The Western Company of North America

ADDRESS: 2401 Sivley
Artesia New Mexico 88210
505/746-3140

CONTACT PERSON: Phillip Box

PHONE: 713/629-2861

III LOCATION: SE/4 SE/4 Sec 32 T16S, R26R, NMPM, Eddy Co., Artesia, New Mexico

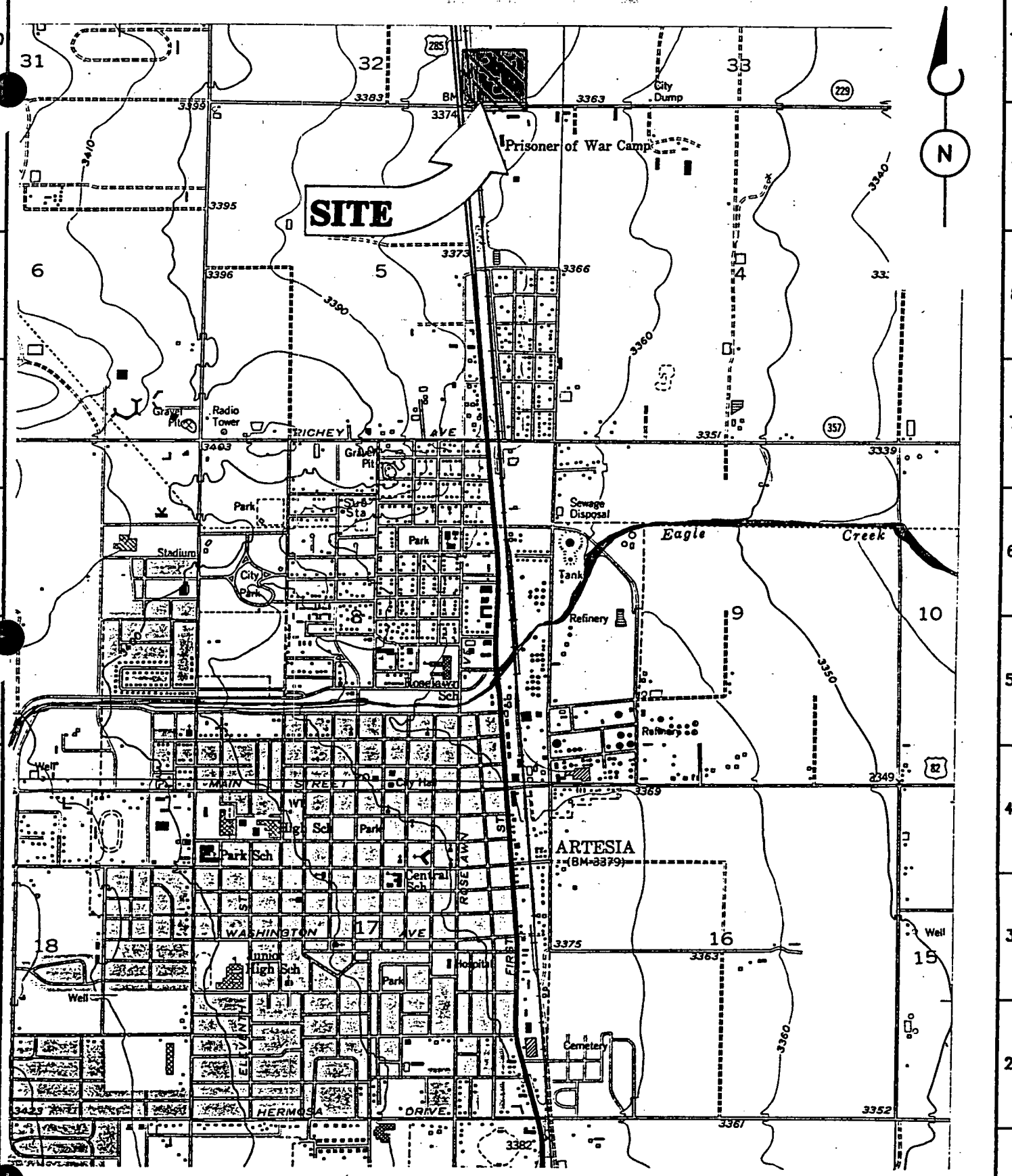
TOPOGRAPHIC MAP: Figure III.1

IV OWNER: The Western Company of North America

ADDRESS: 515 Post Oak Blvd Ste 915
Houston TX 77027-9407
713/629-2861

FIGURE III.1

LOCATION - TOPOGRAPHIC MAP



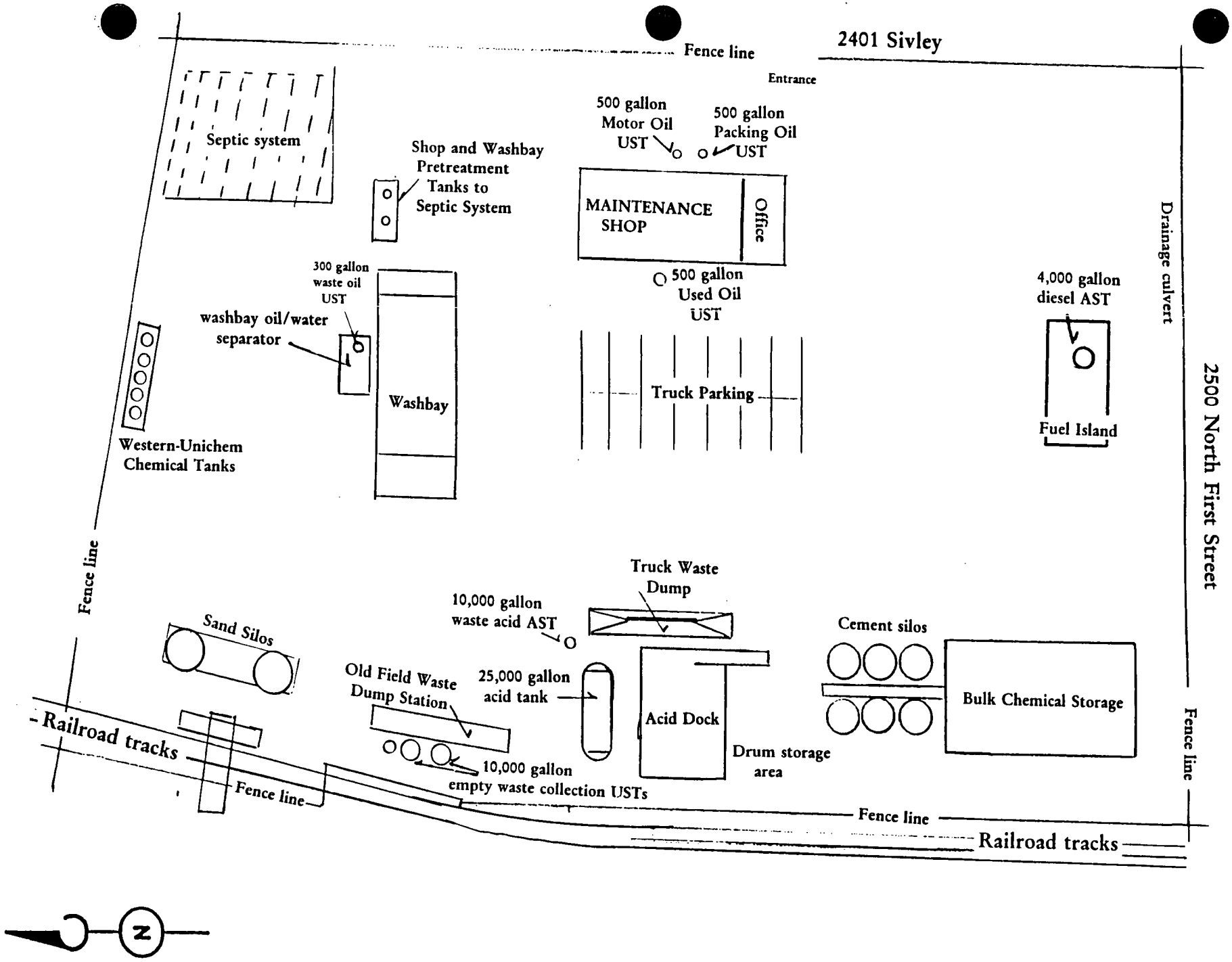
Brown and Caldwell Consultants, DALLAS–HOUSTON, TEXAS	0 1000 2000 SCALE: 1" = 2000'	TITLE: VICINITY MAP	DATE: 03/02/93
	DRAWN BY: JDN DATE 2/16	CLIENT: WESTERN COMPANY OF NORTH AMERICA	PROJECT NUMBER: 7440–01
REV. / DESCRIPTION / BY / DATE	CHK'D BY: JLC DATE 2/16	SITE LOCATION: ARTESIA, NEW MEXICO	FIGURE NUMBER: 1–1
	APPROVED: LMW DATE		

SECTION V

FACILITY DESCRIPTION & DIAGRAM

ARTESIA FACILITY DESCRIPTION AND DIAGRAM

The Western Company of North America (Western-Artesia) provides cementing, acidizing and high pressure pumping services to oil and gas well operators in the Artesia, New Mexico area. The principal materials stored and utilized in the servicing operations at the wellhead include: hydrochloric acid, cement, sand, and liquid and dry chemical additives.



The Western Co. of North America
Artesia, NM District

SECTION VI

MATERIALS STORED

CHEMICALS USED AT THE ARTESIA, NEW MEXICO DISTRICT

PRODUCT	WESTERN TYPE	STORED	CONTAINER	WIN NO.	AVERAGE LB/GAL QUANTITY
ACID, ACETIC ACID, AC-2	L	DRUM STG	PLASTIC DRUM	100174	148 G
ACID, CITRIC	L	DRUM STG	PLASTIC DRUM	100091	308 G
ACID, HCL 22°	L	TANK-ABOVE	ABOVEGROUND	100088	18,584 G
ANTI-FOAM, CEMENT AF-11L	L	WAREHOUSE	STEEL DRUM	100280	3 G
ANTI-SLUDGE AGENT, AS-2	L	WAREHOUSE	STEEL DRUM	100200	28 G
BENTONITE	S	WAREHOUSE	BAG	100120	50,039 L
BLOCKING AGENT, WESTBLOCK3X	S	WAREHOUSE	BAG	100219	600 L
CEMENT, API CLASS C	S	SILO	SILO	100022	252,390 L
CEMENT, API CLASS H	S	SILO	SILO	100020	467,650 L
CLAY CONTROL, CLAY MASTER 5	L	DRUM STG	STEEL DRUM	499545	59 G
DE-EMULSIFIER, NINE 40	L	DRUM STG	STEEL DRUM	100472	168 G
DE-EMULSIFIER, I-5	L	DRUM STG	STEEL DRUM	100137	41 G
DE-EMULSIFIER, AQUA FLOW	L	WAREHOUSE	STEEL DRUM	100146	35 G
DISPERSANT, CEMENT TF-4	L	WAREHOUSE	BAG	100290	100 L
EXTENDER, CEMENT API SPEC 10	S	SILO	SILO	100317	130,758 L
EXTENDER, CEMENT ATACLAY	S	WAREHOUSE	BAG	100274	2,000 L
EXTENDER, CEMENT THRIFTY LITE	S	WAREHOUSE	BAG	100275	682 L
EXTENDER, CEMENT WE-1L	L	WAREHOUSE	STEEL DRUM	100273	532 G
FLUORIDE GENERATING COMP, AB-54	S	WAREHOUSE	BAG	100142	500 L
FLUID LOSS AGENT, CEMENT CF-19	S	WAREHOUSE	BAG	499658	361 L
FLUID LOSS AGENT, CEMENT CF-2	S	WAREHOUSE	BAG	100267	697 L
FLUID LOSS AGENT, CEMENT CF-14	S	WAREHOUSE	BAG	499508	1,457 L
FLUID LOSS AGENT, CEMENT DIACEL	S	WAREHOUSE	BAG	100118	95 L
GAS CONTROL AGENT, FLO-LOK 1	S	WAREHOUSE	BAG	100393	50 L
GELLING AGENT, ACIGEL	L	WAREHOUSE	STEEL DRUM	499520	125 G
GELLING AGENT, J-4	S	WAREHOUSE	BAG	499541	106 L
INHIBITOR, HS-2	L	WAREHOUSE	STEEL DRUM	499641	57 G
INHIBITOR, I-8A	L	WAREHOUSE	STEEL DRUM	499617	33 G
INHIBITOR, I-22	L	DRUM STG	PLASTIC DRUM	499655	192 G
INHIBITOR, I-100	L	DRUM STG	STEEL DRUM	499618	37 G
LOST CIRCULATION AGENT,CELLO-SEAL	S	WAREHOUSE	BAG	100295	2,134 L
LOST CIRCULATION AGENT,HI-SEAL 2	S	WAREHOUSE	BAG	499634	5,678 L
LOST CIRCULATION AGENT,GILSONITE	S	WAREHOUSE	BAG	100294	24,254 L
MUD REMOVAL AGENT, SAPP	S	WAREHOUSE	BAG	100323	427 L
PARAFFIN CONTROL, PARASOL D	L	WAREHOUSE	STEEL DRUM	100222	39 G
PARAFFIN CONTROL, PARATROL L	L	DRUM STG	STEEL DRUM	100463	48 G
PROPPANT, SAND CLASS D	S	SILO	SILO	100008	179,100 L
PROPPANT, SAND CLASS E	S	SILO	SILO	100004	44,800 L
RETARDER, CEMENT WR-15	S	WAREHOUSE	BAG	100287	238 L
SALT, CALCIUM CHLORIDE	S	WAREHOUSE	BAG	100112	6,508 L
SALT, NACL FINE	S	WAREHOUSE	BAG	100404	28,665 L
SALT, NACL MEDIUM	S	WAREHOUSE	BAG	100495	21,322 L
SALT, POTASSIUM CHLORIDE	S	WAREHOUSE	BAG	100114	1,165 L
SCALE CONTROL, P-8	L	WAREHOUSE	STEEL DRUM	100127	17 G
SCALE CONTROL, P-9	L	WAREHOUSE	STEEL DRUM	100129	96 G
SEQUESTERING AGENT, NITRILOTRIACETIC ACID	S	WAREHOUSE	BAG	499587	1,053 L
SPECIAL AGENT, CEMENT	S	WAREHOUSE	BAG	499588	29,279 L
SPECIAL AGENT, CEMENT, STATIC FREE	S	WAREHOUSE	BAG	499680	269 L

CHEMICALS USED AT THE ARTESIA, NEW MEXICO FACILITY continued

PRODUCT	WESTERN TYPE	STORED	CONTAINER	WIN NO.	AVERAGE LB/GAL QUANTITY
SPECIAL AGENT, CEMENT, THIXAD	S	WAREHOUSE	BAG	100318	4,108 L
SURFACTANT, FLO BACK 10	L	WAREHOUSE	STEEL DRUM	100462	18 G
SURFACTANT, FS-2	L	WAREHOUSE	STEEL DRUM	100167	42 G
SURFACTANT, LT-5	L	WAREHOUSE	STEEL DRUM	100193	36 G
SURFACTANT, LT-32	L	WAREHOUSE	STEEL DRUM	499684	44 G
SUSPENDING AGENT, LT-21	L	WAREHOUSE	STEEL DRUM	100138	23 G

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

100091

MATERIAL SAFETY DATA SHEET

DATE: FEB. 1985

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
50% solution of citric acid	Citric Acid, Liquid (XR-2L)
CHEMICAL FAMILY	**FORMULA**
citric acid	W.I.N. 100091

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Corrosive Liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	Citric Acid
HAZARD CLASS	Corrosive Liquid, n.o.s.
IDENTIFICATION NUMBER	UN1760
D.O.T. LABEL(S) REQUIRED	Corrosive Label must be applied
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
Citric Acid	50	

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) not established		SPECIFIC GRAVITY (H_2O=1)	1.2
VAPOR PRESSURE (mm Hg.) not established		PERCENT, VOLATILE BY VOLUME (%) not established	
VAPOR DENSITY (AIR=1) not established		EVAPORATION RATE (_____ =1) not established	
SOLUBILITY IN WATER	1.25		

APPEARANCE AND ODOR Clear, colorless to faintly yellow-green liquid.essentially no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA N/A			
SPECIAL FIRE FIGHTING PROCEDURES N/A			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

(Continued on reverse side)

TRADE NAME: W.I.N.100091,ACID,citric,50% solution,XR-2L

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	No TLV established
EFFECTS OF OVEREXPOSURE	May be mild eye and skin irritant
EMERGENCY AND FIRST AID PROCEDURES	Flush skin contact with water and flush eye contact immediately with plenty of water. Seek medical care for eyes.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	N/A
INCOMPATABILITY *(Materials to avoid)*			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	N/A

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Do not attempt to recover.
WASTE DISPOSAL METHOD
Flush with water to drains.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*	None		
VENTILATION	LOCAL EXHAUST	None	SPECIAL
	MECHANICAL *(General)*	None	OTHER
PROTECTIVE GLOVES	Standard work gloves	EYE PROTECTION	Safety glasses
OTHER PROTECTIVE EQUIPMENT			

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
None normally required.
OTHER PRECAUTIONS
None

100174

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 15 Mar 78

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 7610?

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Acetic Acid & Acetic Anhydride	AC-2
CHEMICAL FAMILY	**FORMULA**
Acid	40% acetic acid, 60% acetic anhydride

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Corrosive liquid, N.O.S.
NAME OF HAZARDOUS COMPONENT	Acetic Anhydride #
HAZARD CLASS	Corrosive material
IDENTIFICATION NUMBER	UN1760
D.O.T. LABEL(S) REQUIRED	Corrosive
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
#		

SECTION III - PHYSICAL DATA

@ 1.0

8.74

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1)	
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR	clear, colorless liquid - sharp acrid odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
112°F, Tag Open cup; 109°F, Tag Closed Cup		~~2.9%~~	~~10.3%~~

EXTINGUISHING MEDIA Water spray, dry chemical, and alcohol foam are effective extinguishing agents for acetic anhydride fires.

SPECIAL FIRE FIGHTING PROCEDURES Addition of water will reduce intensity of flames. If a leak or spill has not ignited, use water spray to disperse the vapor and to protect the personnel trying to stop the leak. Fire fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Water and foam react with chemical, but the heat liberated is not enough to create a hazard. Dry chemical forced below surface can cause foaming and boiling.

(Continued on reverse side)

AC-2

TRADE NAME: ~~AB-54~~

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
2.5 mg/m^3 as F

EFFECTS OF OVEREXPOSURE
Skin: may cause burns or rash. Eyes: irritation. Internal: harmful if swallowed.
Inhalation of dust may cause irritation of the respiratory system.

EMERGENCY AND FIRST AID PROCEDURES
Skin: wash with water. Tincture of zephiran chloride, iced, soaks.
Eyes: flush with water at least 15 minutes. Consult a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE		

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR		

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

WASTE DISPOSAL METHOD

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Bureau of Mines approved respirator.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION: Goggles or shield

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS

W.I.N.100088,ACID,HCl,22°Be
W.I.N.100092,ACID,HCl,20°Be

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y.

MATERIALS INFORMATION SERVICES

No. 30 A

HYDROCHLORIC ACID

Date October 1977

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: HYDROCHLORIC ACID
DESCRIPTION: This material is a water solution of hydrogen chloride gas.
OTHER DESIGNATIONS: Muriatic Acid, Concentrated Hydrochloric Acid, GE Material D4A3, CAS# 007647010
MANUFACTURER: Available from many suppliers

SECTION II. INGREDIENTS AND HAZARDS	%	HAZARD DATA
Hydrogen chloride (HCl)	<38	TLV 5 ppm (C)*
Impurities (depends on acid grade)	Traces	
Water	Balance	

*C denotes a ceiling concentration that should not be exceeded in the workplace

SECTION III. PHYSICAL DATA	18°Be'	20°Be'	22°Be'	23°Be'
Weight % HCl	27.9	31.4	35.2	37.1
Boiling pt, 1 atm, deg F	208	182	144	123
Freezing point, deg F	-43.6	-63.4	-86.3	-101.2
Specific gravity, 60/60 F	1.142	1.160	1.179	1.189
Vapor pressure, 25 C, mm Hg	--	25	--	--

Materials are completely water soluble and nearly 100% volatile.
Appearance & Odor: Colorless to lt. yellow fuming liquid with a pungent, suffocating odor.

SECTION IV. FIRE AND EXPLOSION DATA			LOWER	UPPER
Flash Point and Method	Autoignition Temp.	Flammability Limits In Air		
N/A	N/A	N/A		

Extinguishing media: Select that suitable for surrounding fire.
This nonflammable material can react with many metals, such as iron, to produce flammable hydrogen gas. The acid can be neutralized with bases such as slaked lime or soda ash.
Use a water spray to cool fire exposed containers to prevent rupture.
Firefighters should use full protective clothing and self-contained breathing apparatus when this material is involved in a fire situation.

SECTION V. REACTIVITY DATA

This material is stable when properly contained and handled. It is a strong mineral acid and is, thus, highly reactive with materials such as metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials. It is highly corrosive to many materials.
It can liberate significant levels of HCl by vapor pressure at room temperature when concentrated and large amounts of HCl when heated.
Reaction with most metals will produce hydrogen gas.

GENERAL ELECTRIC

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W.I.N.100088,ACID,HCl,22°Be
W.I.N.100092,ACID,HCl,20°Be

NO. 30 A

SECTION VI. HEALTH HAZARD INFORMATION

TLV 5 ppm ceiling (as HCl)

Prolonged inhalation of HCl vapors or mist just above the TLV can damage the teeth and irritate the nasal passages. Higher concentrations (50+ppm) will cause coughing and choking and produce severe irritation and damage of the mucous membranes of the upper respiratory tract. 1300 ppm is immediately dangerous to life.

Hydrochloric acid is corrosive and causes burns of human tissue. Ingestion can produce burns of the mouth and digestive tract.

FIRST AID:

Eye contact: Flush thoroughly with running water for 15 minutes. Get medical aid.

Skin contact: Wash affected areas thoroughly with much water. For gross contact, remove contaminated clothing under the safety shower; prolong washing for 15+ minutes.

Ingestion: Give limewater or water and milk of magnesia to drink. Do not induce vomiting! Get medical aid.

Inhalation: Remove to fresh air; restore breathing, if required. Oxygen can be given under proper supervision. Get medical aid.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Large spills should be reported to safety personnel. Remove sources of ignition. Supply ventilation. Stay upwind of large spills in outside areas. Those involved in clean up of large spills must use full protective clothing, boots, and self-contained breathing apparatus.

Flush large spills with water to holding area and neutralized with soda ash or lime. Flushing to sewer depends on allowable salt concentrations in effluent water. Follow local, State and Federal regulations. Cover small spills with a mixture of soda ash and slaked lime. Flush the neutralized material to the sewer with much water.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide adequate exhaust ventilation in areas of use or storage to meet TLV requirements. Face velocity of hoods should exceed 100 lfm. Use approved respirator or self-contained breathing apparatus for emergency or non-routine conditions.

Those handling hydrochloric acid should use protective clothing and equipment to prevent body contact with the liquid. Use rubber gloves or gauntlets, rubber apron, rubber boots, long sleeved shirt, etc. Use chemical safety goggles and/or face shield for eye protection against splashing of acid.

An eye wash station and safety shower must be located near areas where hydrochloric acid is handled or used.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store closed containers in clean, cool, open or well-ventilated areas. Keep out of sun. Area should have acid resistant floor and approved drainage. Keep away from oxidizing agents and alkaline materials. Protect containers from damage or breakage. Use non-sparking tools in areas around tanks and pipes where hydrogen might be generated.

Avoid inhalation of HCl vapors; if odor can be detected, workers are being overexposed! Odor of HCl gives adequate warning for a prompt voluntary withdrawal from the exposure area. Avoid skin contact.

Provide emergency neutralization materials and equipment storage & use areas.

Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use

APPROVALS: MIS, CRD J. M. Nielsen

Industrial Hygiene and Safety

MEDICAL REVIEW:

GENERAL ELECTRIC

100250

RECEIVED
JAN 23 1989
R.E.F.C.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 11NOV88

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS: proprietary blend	TRADE NAME AND SYNONYMS: ANTI-FOAM, AF-11L
CHEMICAL FAMILY: surfactant in EGMBE	FORMULA: W.I.N. 100280

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Combustible liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	ethyleneglycol monobutylether
HAZARD CLASS	Combustible material
IDENTIFICATION NUMBER	NA1993
D.O.T. LABEL(S) REQUIRED	Combustible liquid
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
2-butoxyethanol CAS [111-76-2]	50	50 ppm
8 hr TWA(skin) = 25 ppm or 120 mg/m^3		
Oral L D_{50} (rat) = 1480 mg/kg		
Skin L D_{50} (guinea pig) = 230 mg/kg		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) @ 1 atm	340	SPECIFIC GRAVITY (H_2O=1) @15.6°C	0.911
VAPOR PRESSURE (mm Hg.) @ 20°C	0.6	PERCENT, VOLATILE BY VOLUME (%)	50
VAPOR DENSITY (AIR=1)	4.07	EVAPORATION RATE (BuAc = 1)	0.06
SOLUBILITY IN WATER	dispersible		
APPEARANCE AND ODOR	pale yellow liquid, ether like odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
141°F(61°C) PMCC		2.2	21.2

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical or water fog; alcohol foam should be used for large fires. Use a water spray to cool fire-exposed metal containers.

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS: This material is a moderate fire hazard when exposed to heat and flames. Firefighters should use respiratory and eye protection.

(Continued on reverse side)

Form OSHA-20

TRADE NAME: W.I.N. 100280, ANTI-FOAM, AF-11L

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: none established for product

EFFECTS OF OVEREXPOSURE: see Section IXA, page 3

EMERGENCY AND FIRST AID PROCEDURES: see Section IXA, page 3

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		N/A
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*: Avoid mixtures with strong oxidizers or alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal-oxidative degradation in air produces acrid fumes including CO.

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		N/A
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Notify safety personnel of large spills; evacuate area; provide ventilation, and eliminate all sources of ignition. Use protective equipment to avoid breathing vapors or contact, in cleaning up spills. Pick up liquid or collect on absorbent material; place in closed containers prior to disposal in a sanitary landfill or by incineration. Liquid or residues can be flushed with water to an open area, not to sewers.

WASTE DISPOSAL METHOD: Liquid waste should be disposed of via a licensed solvent waste disposal company or by burning in an approved incinerator. Follow federal, state, and local regulations. Incineration is the preferred disposal method.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*: Not normally required. Use approved self-contained breathing apparatus for non-routine and emergency situations.

VENTILATION		
	LOCAL EXHAUST: where misting occurs	SPECIAL: N/A
	MECHANICAL *(General)*: to meet TLV requirements	OTHER: N/A

PROTECTIVE GLOVES	EYE PROTECTION
cuffed rubber gloves	chemical splash goggles/face shield

OTHER PROTECTIVE EQUIPMENT: eyewash facility should be nearby work area

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Storage should be in closed containers in a clean, cool well-ventilated fireproof storage area. Keep away from heat and ignition sources. Do not store with oxidizers.

OTHER PRECAUTIONS: Caution should be taken when handling this compound as it can be readily absorbed through the skin to yield toxic effects; prevent repeated skin contact. Preplacement and periodic medical exams are suggested, including evaluation of blood, CNS, kidneys, liver, lungs and skin.

100250

RECEIVED
JAN 23 1989
R.E.F.C.

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

DATE:

SECTION I	
Supplier's Name The Western Company of North America	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS proprietary blend	TRADE NAME AND SYNONYMS ANTI-FOAM, AF-111
CHEMICAL FAMILY surfactant in EGMBE	FORMULA W.I.N. 100280

SECTION IXA -- SPECIAL PRECAUTIONS

continued from Section V, page 2

EFFECTS OF OVEREXPOSURE

Headaches, nausea, dizziness and vomiting may result from inhalation or absorption through the skin. The material itself and its metabolite are hemolytic agents. Extreme exposure may result in liver and kidney damage. Eye, nose and throat irritation can occur above 100 ppm. Tears, temporary clouding of the cornea, drowsiness and shortness of breath can occur from excessive exposure.

FIRST AID:

Skin Contact: Remove contaminated clothing, and flush exposed area well with water immediately. Then wash with soap and water. Get medical help for persistent irritation or if large areas were exposed.

Eye Contact: Flush eyes with copious amounts of water immediately, making sure to flush the eyelids. Get medical assistance.

Inhalation: Remove person to fresh air, keep patient quiet; get medical assistance.

Ingestion: Induce vomiting and call a physician.

WESTERN
Pacesetters

Western Petroleum Services

W.I.N. 100280

AF-11L

ANTI-FOAM AGENT

Flash Point: 141°F(61°C)
Net Content: 38 lbm(17.2 kg)
5 gal(18.9 L) @ 60° F(16°C)

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No. 2402.0 WY

SPECIFIC USAGE: This material is recommended at a concentration of one (1) pint per ten (10) bbl.

When Handling This Product Employees MUST WEAR resistant gloves, such as neoprene. Safety glasses/side shields. Use BM type B organic vapor mask when heating; wear impervious clothing and boots. NIOSH approved SCBA w/full face piece.

FOR INDUSTRIAL USE ONLY

CAUTION!

EYE AND SKIN IRRITANT. MAY BE HARMFUL IF SWALLOWED. DAMAGE TO KIDNEYS, LUNGS, LIVER, NERVES, BLOOD OR HEART ABNORMALITIES.

Do not get in eyes, on skin or clothing; avoid breathing vapors. Keep container closed. Have adequate ventilation. Have protective and emergency equipment on hand.

Spill or Leak: Wear protective equipment (eyes and skin). Eliminate source of ignition. Ventilate the area. Absorb liquid on paper, vermiculite, or other absorbent material. Disposal: Land fill unless prohibited by law otherwise, destroy by liquid incineration.

First Aid: Inhalation: Remove victim to fresh air. Apply artificial resuscitation, if not breathing. Skin: Flush with soap and water. Eye: Flush with water. Ingestion: Consult a physician immediately.

Fire Fighting: Foam, Co_2 or dry chemical. Respiratory protection against hazardous combustion products. Vapors are heavier than air and may travel along the ground and may be ignited by heat or flames. Emits acrid fumes.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

Emergency Telephone: (817) 731-5100
(817) 731-5433

batch no.

*****D.O.T. PROPER SHIPPING NAME: Combustible liquid, n.o.s., contains ethylene glycolmonobutylether (NA1993)*****

100200

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 7 SEP 84

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS alkylarylsulfonic acids in alcohol and H_2O	TRADE NAME AND SYNONYMS ANTI-SLUDGE AGENT, AS-2
CHEMICAL FAMILY acid	FORMULA W.I.N. 100200

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Corrosive liquid, n.o.s. RQ 1000/454
NAME OF HAZARDOUS COMPONENT	alkylarylsulfonic acid
HAZARD CLASS	corrosive material
IDENTIFICATION NUMBER	UN 1760
D.O.T. LABEL(S) REQUIRED	corrosive liquid
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
isopropanol (skin)	11	400ppm
isobutanol	6	50ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1) @ 60° F	1.1
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	17
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)(butyl acetate=1)	
SOLUBILITY IN WATER	dispersible	pH	< 1
APPEARANCE AND ODOR	dark color, alcoholic odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
105° PMCC			

EXTINGUISHING MEDIA
CO_2, dry chemical, foam

SPECIAL FIRE FIGHTING PROCEDURES
None

UNUSUAL FIRE AND EXPLOSION HAZARDS
May evolve oxides of sulfur.

(Continued on reverse side)

TRADE NAME: W.I.N. 100200, ANTI-SLUDGE AGENT, AS-2

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
None for product

Isobutanol 50 ppm
Isopropanol (skin) 400 ppm

EFFECTS OF OVEREXPOSURE
May cause eye or skin irritation. Inhalation may cause nausea or vomiting

EMERGENCY AND FIRST AID PROCEDURES
Eyes - flush with water for 15 minutes. Call a physician. Skin-wash thoroughly with soap and water. Ingestion - do not induce vomiting. Give milk or water. Call a physician. Inhalation - remove to fresh air. Treat symptoms.

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Strong bases, oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS
CO_2, oxides of sulfur

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Contain on absorbent material.

WASTE DISPOSAL METHOD
Complete incineration.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
None normally required

VENTILATION		
	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
rubber	goggles

OTHER PROTECTIVE EQUIPMENT
none

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Keep container closed. Use with proper ventilation. Keep away from heat, sparks, or flames.

OTHER PRECAUTIONS
Do not take internally. Avoid eye and skin contact. Do not breathe vapors.

WESTERN

Pacesetters

Western Petroleum Services

NIN 100200

AS-2

ACID ANTI-SLUDGE AGENT

Net Contents: 440 lb(200 kg)
53.3 gal(202 L) @ 60°F

DIRECTIONS:

FOR PROPER USE, REFER TO SERVICE BULLETIN NO.: 536.0 WG

SPECIFIC USAGE: USE AT 5 TO 25 GALLONS/1000 GALLONS HCL.
NOTE: AS-2 IS ANIONIC.

WHEN HANDLING THIS PRODUCT, EMPLOYEES MUST WEAR PROTECTIVE RUBBER GLOVES AND GOGGLES.

FOR INDUSTRIAL USE ONLY

WARNING!

CAUSES EYE INJURY AND SKIN IRRITATION. MAY BE HARMFUL IF INHALED, INGESTED OR ABSORBED THROUGH SKIN.

DO NOT GET IN EYES. AVOID CONTACT WITH SKIN AND CLOTHING. WEAR GOGGLES OR FACE SHIELD WHEN HANDLING. AVOID BREATHING VAPOR. USE WITH ADEQUATE VENTILATION. DO NOT TAKE INTERNALLY. KEEP AWAY FROM HEAT AND OPEN FLAMES. KEEP CONTAINER CLOSED WHEN NOT IN USE.

IN CASE OF CONTACT, WASH SKIN WITH SOAP AND WATER; FOR EYES, FLUSH WITH WATER FOR AT LEAST 15 MINUTES, AND GET MEDICAL ATTENTION. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLLY BY MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN; GET MEDICAL ATTENTION.

ATTENTION: SINCE EMPTY CONTAINERS CAN STILL CONTAIN PRODUCT RESIDUES, CONTINUE TO OBSERVE LABEL EVEN WHEN EMPTY. DO NOT REUSE EMPTY CONTAINER FOR ANY PURPOSE.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured by:

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

Batch no.

100200

Budget Bureau No. 44-R1307
Approval Expires April 30, 1971

U.S. DEPARTMENT OF LABOR

100170

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

September 11, 1978

SECTION I

MANUFACTURER'S NAME: Baroid Division, NL Industries, Inc.	EMERGENCY TELEPHONE NO.: 713/527-1366
ADDRESS (Number, Street, City, State, and ZIP Code): P. O. Box 1675, Houston, Texas 77001	
CHEMICAL NAME AND SYNONYMS: Sodium Montmorillonite	TRADE NAME AND SYNONYMS: Western Bentonite
CHEMICAL FAMILY: Clay	FORMULA: N.A.

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Bentonite 100%.		
THIS MATERIAL IS NOT HAZARDOUS.		

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	N.A.	SPECIFIC GRAVITY (H_2O=1)	2.5
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT VOLATILE BY VOLUME (%)	N.A.
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (_____=1)	N.A.
SOLUBILITY IN WATER	N.A.		
APPEARANCE AND ODOR	Tan Powder - odorless		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	Will not burn	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA	Water			
SPECIAL FIRE FIGHTING PROCEDURES	N.A.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	N.A.			

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Nuisance dust 30mppcf of total dust with less than 1% respirable quartz.
EFFECTS OF OVEREXPOSURE	Prolonged inhalation may cause lung injury
EMERGENCY AND FIRST AID PROCEDURES	

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATABILITY *(Materials to avoid)*			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	Normal housekeeping Causes slippery surfaces when wet
WASTE DISPOSAL METHOD	Landfill

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*	Dust Respirator		
VENTILATION	LOCAL EXHAUST		SPECIAL
	MECHANICAL *(General)*	X	OTHER
PROTECTIVE GLOVES		EYE PROTECTION	
OTHER PROTECTIVE EQUIPMENT			

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
OTHER PRECAUTIONS

W.I.N.100219,BLOCK,Westblock3X,regular(B-23
W.I.N.100221,BLOCK,Westblock3X,super

Material Safety Data Sheet

From Genium's Reference Collection
Genium Publishing Corporation
1145 Catalyn Street
Schenectady, NY 12303-1836 USA
(518) 377-8855

GENIUM PUBLISHING CORP.

No. 402
BENZOIC ACID
(Revision A)

Issued: November 1978
Revised: February 1987

SECTION 1. MATERIAL IDENTIFICATION

MATERIAL NAME: BENZOIC ACID

DESCRIPTION/USES: Used in plasticizers, food preservatives, tobacco seasoning, flavors, perfumes, dentifrices, and as an antifungal agent.

OTHER DESIGNATIONS: Benzenecarboxylic Acid, Phenyl Carboxylic Acid, Phenylformic Acid, C_6H_5COOH, CAS #0065-85-0

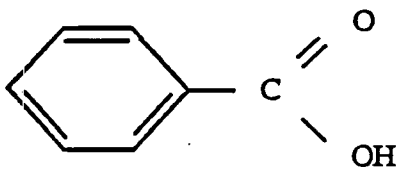
MANUFACTURER/SUPPLIER: Available from many suppliers, including:
Velsicol Chemical Corp., 341 E. Ohio St., Chicago, IL 60611;
Telephone (312) 670-4500

HMIS

H	1		
F	1	R	1
R	0	I	--
PPE*		S	1
*See Sect. 8		K	1

SECTION 2. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Benzoic Acid, CAS #0065-85-0	100%	No TLV Established. Human, Skin, 22 mg/3 days, Intermittent: Moderate Irritation Man, Oral, LDLo: 500 mg/kg Rat, Oral, LD_{50}: 2530 mg/kg Rabbit, Eye, 100 mg: Severe Irritation



SECTION 3. PHYSICAL DATA

Boiling Point at 1 atm ...480.6°F (249.2°C)
(Sublimes at 100°C and readily steam distills)
Vapor Pressure at 96°C, mm Hg ... 1.0
Vapor Density (Air=1) ... 4.2
Water Solubility at 25°C, g/liter ... 2.9

Specific Gravity (H_2O=1) ... 1.3
Molecular Weight ... 122.1
Melting Point ... ca 251.6°F (122°C)
Percent Volatile by Volume ... Negligible

Appearance and odor: Colorless-to-white solid: crystals, powder, platelets, scale (technical-grade flake can also be tan colored); benzoin- or benzaldehydelike odor.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temperature	Flammability Limits in Air	LOWER	UPPER
249.8°F (121°C), CC	1065.2°F (574°C)	Not Found	--	--

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, foam, water spray, or fog to extinguish a benzoic acid fire.

UNUSUAL FIRE/EXPLOSION HAZARDS: High concentrations of benzoic acid dust particles in the air may form an explosive mixture. Vapors from hot or molten benzoic acid may form explosive mixtures with air.

SPECIAL FIRE-FIGHTING PROCEDURES: This combustible material is a slight fire hazard when exposed to heat or flames. Fire fighters should wear protective clothing and use self-contained breathing apparatus when fighting fires involving it.

SECTION 5. REACTIVITY DATA

Benzoic acid is stable. Hazardous polymerization cannot occur.

As a carboxylic acid, this material reacts exothermically with strong bases and can generate hydrogen gas when a water solution made from it reacts with metals.

Avoid combining benzoic acid with strong oxidizing agents.

Hazardous products of decomposition can include phenol, benzene, carbon monoxide, and carbon dioxide.

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SECTION 6. HEALTH HAZARD INFORMATION

Benzoic acid is not listed as a carcinogen by the NTP, IARC, or OSHA.
Inhalation of this material's dust or vapors may cause irritation of the upper respiratory tract. Prolonged or repeated contact may result in irritation. Contact with eyes can cause serious eye irritation and possible injury. Ingestion of excessive amounts may cause nausea, gastrointestinal disorders, and/or allergic response.
TARGET ORGANS: Eyes. PRIMARY ENTRY: Inhalation. ACUTE EFFECTS: Extremely irritating and corrosive to eyes. CHRONIC EFFECTS: Unknown.

FIRST AID: EYE CONTACT: Flush eyes thoroughly, including under eyelids, with running water for 15 minutes. Get medical help.* SKIN CONTACT: Remove contaminated clothing. Flush affected area with water; wash with soap and water. Get medical help.* INHALATION: Remove victim to fresh air. Restore and/or support his breathing as required. Get medical help.* INGESTION: Rinse victim's mouth with water. Give him 2 to 3 glasses of water to drink to dilute the material. Induce vomiting. Do not induce vomiting or give anything by mouth to someone who is unconscious or convulsing. Get medical help.*

* GET MEDICAL ASSISTANCE = In plant, community, paramedic. Get medical help for further treatment, observation, and support after first aid.

SECTION 7. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of benzoic acid spills or leaks. Cleanup personnel should use appropriate personal protection equipment (see sect. 8). Sweep up solid material and place it in drums for disposal. Avoid raising benzoic acid dust.

DISPOSAL: Bury waste in an approved landfill or incinerate it under controlled conditions. Follow Federal, state, and local regulations.

EPA, Clean Water Act, Reportable Spill Quantity: 5,000 lbs (40 CFR 117.3)

SECTION 8. SPECIAL PROTECTION INFORMATION

Supplier recommends a C-241 respirator with a C-241-1 filter for protection from dust.

Provide general dilution and local exhaust ventilation in sufficient volume and pattern to keep concentration of hazardous ingredients listed in section 2 below the minimal exposure at which irritation may occur.

Wear appropriate protective clothing such as chemical safety goggles and/or a full face shield to prevent skin or eye contact when working around hot or molten benzoic acid.

Eyewash stations and washing facilities should be readily accessible in areas of use and handling.

Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them. Particles may adhere to contact lenses and cause corneal damage.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Store benzoic acid in tightly closed containers in a cool, dry, well-ventilated area away from oxidizing agents, strong bases, and sources of heat or ignition.
Molten benzoic acid is very hot (251.6°F [122°C]). Its vapors sublime readily and condense on cold surfaces, and this can block vent openings.
Avoid breathing benzoic acid dust. Prevent contact of this material with your eyes. Minimize its contact with your skin by wearing proper gloves and suitable work clothing. Practice good personal hygiene. Wash thoroughly after handling it. Do not take this material out of your work area or to your home on your clothing or equipment. Do not eat benzoic acid.

Benzoic acid is designated as a hazardous substance by the EPA (40 CFR 116).
DOT Classification: ORM-E DOT ID No. NA9094
Data Source(s) Code: 1, 2, 4-12, 14, 23, 42, 55, 58, 82, 84. CK

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Approvals	
Indust. Hygiene/Safety	4/87
Medical Review	

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WENA-10R36 (05/86)

INTER-OFFICE CORRESPONDENCE

To [redacted] At FW - Accident Prevention

From Robert W. Anderson RWA At FW - Chemical Technology Development

Date 19JAN89

RE: Safety Information Update

This is to inform you of revisions, additions, deletions or replacement of products or chemicals and the relevant safety data.

Western Trade Name: Westblock 3X, regular & super W.I.N.: 100219,100221
Chemical Name (if not trade named): benzoic acid, well graded flakes

Addition __ Revision X Replacement __ Deletion __ to product line
Western Product X Western System __
Cementing __ Stimulation X
DOT Proper Shipping Name & I.D. Number (SPM-04-02): ORM-E,n.o.s.(NA9094)
DOT Hazardous Material Class: N/A
Label: N/A
Chemical Storage Class (SPM-04-01): I.1.
Chemical First Aid Guide Class (SPM-04-04):
Eyes * Lungs - Skin G Mouth P
EPA Hazardous Waste Classification:
Reportable Quantity: RQ 5000 / 2270
Material Safety Data Sheet: Attached XXX Not Available ____
On File at Research XXX

Delete all previous data on B-23 and Westblock 3X

cc: Legal Services
Product Specification File (original)

Attachments: MSDS
Label
Precautionary Statement

Note: If deletion, attach copy of page(s) to be deleted, write delete across the page(s) attached.

"A man's judgment is no better than his information"

100219

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 15 Mar. 78

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Benzoic Acid	Westblock III-X
CHEMICAL FAMILY: Organic Acid	FORMULA: C_6H_5 COOH (well graded)

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	ORM-E, n.o.s. (RQ5000/2270)
NAME OF HAZARDOUS COMPONENT	Benzoic acid X
HAZARD CLASS	ORM-E
IDENTIFICATION NUMBER	NA9094
D.O.T. LABEL(S) REQUIRED	None
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
X		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	480°	SPECIFIC GRAVITY (H_2O=1) 28°F	1.316
VAPOR PRESSURE (mm Hg.) solid		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1) butyl acetate=1	1
SOLUBILITY IN WATER @ 25°C = 0.34%	slight		
APPEARANCE AND ODOR	White flakes or crystals - slight odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
250°F (CC)			

EXTINGUISHING MEDIA
Dry chemical, CO_2, foam, water fog

SPECIAL FIRE FIGHTING PROCEDURES
None

UNUSUAL FIRE AND EXPLOSION HAZARDS
None

(Continued on reverse side)

TRADE NAME: WESTBLOCK III-X 100219

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Not available

EFFECTS OF OVEREXPOSURE
Liquid is irritating to eyes. May be harmful if swallowed or absorbed through skin.

EMERGENCY AND FIRST AID PROCEDURES
Flush eyes for 15 min. and get medical attention. Wash skin thoroughly with soap and water and get medical attention if irritation or redness develops. Launder clothes before reuse.

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		Keep away from heat, sparks and open flames.
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
None

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Extinguish all sources of ignition. Wash down with water or soak up on sand and dispose of in an approved industrial waste landfill. Do not wash down with water where runoff will contaminate important water sources.

WASTE DISPOSAL METHOD
Incinerate in an incinerator equipped with an afterburner and scrubber or bury in an approved industrial landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
None required in normal use.

VENTILATION		
	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
Rubber	Face shield or goggles

OTHER PROTECTIVE EQUIPMENT
Rubber boots and apron, if possibility of contact during use exists.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Store away from heat, sparks and open flames.

OTHER PRECAUTIONS
Do not transfer to improperly marked containers. Keep container closed when not in use.

100852

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME: Universal Atlas Cement - Div. of U. S. Steel Corp.	EMERGENCY TELEPHONE NO.: Area Code 412-433-7529
ADDRESS (Number, Street, City, State, and ZIP Code): 600 Grant St., Pittsburgh, Penna. 15230	
CHEMICAL NAME AND SYNONYMS: Class H Portland Cement	TRADE NAME AND SYNONYMS: Atlas Portland Cement
CHEMICAL FAMILY: Calcium Silicates, Aluminates, Ferrites	FORMULA: $(3CaO \cdot SiO_2)$ $(2CaO \cdot SiO_2)$ $(3CaO \cdot Al_2O_3)$ $(4CaO \cdot Al_2O_3 \cdot Fe_2O_3)$

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS: NA			BASE METAL: NA		
CATALYST: NA			ALLOYS: NA		
VEHICLE: NA			METALLIC COATINGS: NA		
SOLVENTS: NA			FILLER METAL PLUS COATING OR CORE FLUX: NA		
ADDITIVES: NA			OTHERS: NA		
OTHERS: NA					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
NA		

BOILING POINT (°F.)	NA	SPECIFIC GRAVITY (H_2O=1)	3.0-3.2
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%)	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (_____=1)	NA
SOLUBILITY IN WATER: Not Soluble			
APPEARANCE AND ODOR: Gray Powder - No Odor			

FLASH POINT (Method used): NA	FLAMMABLE LIMITS: NA	Lel	Uel	
EXTINGUISHING MEDIA: NA				
SPECIAL FIRE FIGHTING PROCEDURES: NA				
UNUSUAL FIRE AND EXPLOSION HAZARDS: NA				

Rev. April 1978

THRESHOLD LIMIT VALUE	<1% Free Silica - 15 mg/M^3 Total Dust; 50 mppcf Portland Cement Dust.
EFFECTS OF OVEREXPOSURE	Questionable small reduction in pulmonary function with long-term heavy exposure.
EMERGENCY AND FIRST AID PROCEDURES	NA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	Yes	
INCOMPATABILITY *(Materials to avoid)*	NA		
HAZARDOUS DECOMPOSITION PRODUCTS	None		
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	Normal Clean Up
WASTE DISPOSAL METHOD	Normal Disposal

RESPIRATORY PROTECTION *(Specify type)*	NIOSH Approved Dust Filter Type Respirators		
VENTILATION	LOCAL EXHAUST	Sufficient to avoid exceeding threshold limit value	SPECIAL
	MECHANICAL *(General)*		OTHER
PROTECTIVE GLOVES	Yes	EYE PROTECTION	Safety Glasses
OTHER PROTECTIVE EQUIPMENT	Protective clothing where exposure is heavy and prolonged		

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	May cause a severe skin irritation and burns on individuals with sensitive skin. Avoid skin and eye contact - Rinse exposed areas immediately and repeatedly with water and get prompt medical attention.
Other Precautions:	

499545

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 12 Jan 87

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Proprietary blend	Clay stabilizer, Clay Master-4, W.I.N. 499545
CHEMICAL FAMILY: cationic polymer solution	FORMULA: Proprietary blend

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Combustible Liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	Methanol
HAZARD CLASS	Combustible Liquid
IDENTIFICATION NUMBER	NA 1993
D.O.T. LABEL(S) REQUIRED	None
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
Methanol	5-15	200 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1) @ 60°F	1.010
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	soluble	pH (100%)	6-8
APPEARANCE AND ODOR	Liquid; sweet odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
126°F(52°C) PMCC			

EXTINGUISHING MEDIA
Foam, dry chemical, CO_2, water fog or spray

SPECIAL FIRE FIGHTING PROCEDURES
Wear self-contained breathing apparatus. Cool exposed containers with water spray.

Avoid breathing vapors or fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Combustible. Do not store with strong oxidants. Vapors are heavier than air.

Do not use welding or cutting torch near drum. Explosion may result.

(Continued on reverse side)

TRADE NAME: W.I.N. 499545, Clay Stabilizer, Clay Master-4

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE Inhalation may cause dizziness, headaches, or unconsciousness. Prolonged or repeated skin contact may result in dermatitis. Eye contact may cause severe irritation, tearing or blurred vision. Ingestion can cause nausea, vomiting or death.

EMERGENCY AND FIRST AID PROCEDURES If ingested, do not induce vomiting. Drink large quantities of water and call a physician. If overcome by vapors, remove to fresh air and call a physician. If breathing is irregular, start resuscitation. For skin contact, wash skin thoroughly with soap and water. Remove contaminanted clothes. For eye contact, flush eyes with large amounts of water for at least 15 minutes and call a physician.

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		use away from heat, sparks or open flames
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Avoid strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, oxides of nitrogen and sulfur.

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate ignition sources. Shut off leak. Wear appropriate protective clothing and respiratory protection. Dike and pump large spills into salvage containers. Soak up residue and small spills with absorbent clay, sand, or dirt, and place in salvage container.

WASTE DISPOSAL METHOD
Incinerate in an incinerator equipped with a afterburner and scrubber or bury in an approved industrial landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* Use with adequate ventilation. If ventilation is not adequate, use approved NIOSH vapor canister.

VENTILATION	LOCAL EXHAUST	SPECIAL
	Normally sufficient	
	MECHANICAL *(General)*	OTHER
	If local exhaust is not adequate	

PROTECTIVE GLOVES	EYE PROTECTION
Chemical resistant	Chemical goggles or face shield

OTHER PROTECTIVE EQUIPMENT
Chemical resistant apron

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Use proper protective clothing and equipment. Do not store near heat, sparks or open flames. Reseal container when not in use and do not add any foreign matter. Store in well ventilated area. Do not store with strong oxidizers. Make sure all electrical equipment is explosion-proof

OTHER PRECAUTIONS

499545

WESTERN
Pacesetters

Western Petroleum Services

W.I.N. 499545

CLAY MASTER-4

Clay Stabilizer

Flash Point: 126°F(52°C) PMCC

Net Contents: 460 pound(207 kg)
55 gallon(209 liter)@ 60°F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 736.0 WG

SPECIFIC USAGE: Use at the rate of 0.5 to 5.0 gal/1000 gal of brine or acid based fracturing fluids. Use at the rate of 4 to 100 gal/1000 gal of brine or acid for matrix treatments.

FOR INDUSTRIAL USE ONLY

WARNING

MAY CAUSE IRRITATION OF THE SKIN AND EYES. AVOID CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID PROLONGED INHALATION OF VAPOR. DO NOT TAKE INTERNALLY.

FIRST AID:
FOR EYES: In case of contact, flush eyes with large amounts of water for at least 15 minutes. Call a physician.
FOR SKIN: In case of contact, remove contaminated clothes. Wash skin thoroughly with soap and water.
FOR INGESTION: If swallowed, do not induce vomiting. Drink large quantities of water. Call a physician.
FOR INHALATION: If breathed in, remove from exposed area to fresh air. Call a physician. If breathing is irregular, start resuscitation
HANDLING: Employees must wear chemical resistant gloves, chemical goggles and chemical resistant apron.
ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Donot cut, puncture or weld on or near this container.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

Emergency Telephone: (817) [illegible] 6100 or 781-5433

Batch no.

P-261(01/[illegible]) *****D.O.T. PROPER SHIPPING NAME: Combustible liquid, n.o.s. contains methanol (NA1993)*****

499545

R-3E2(01/86)

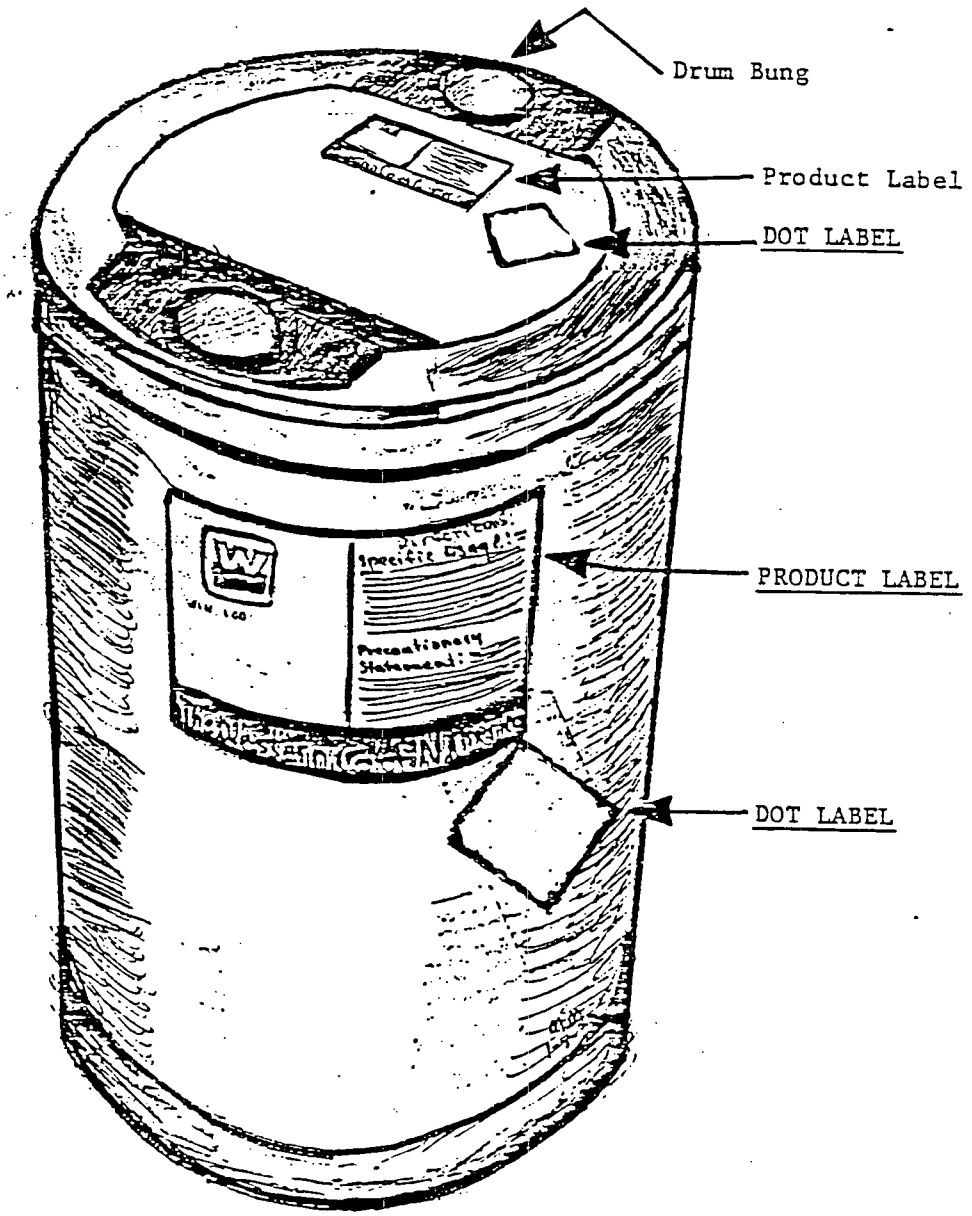
RECOMMENDED

DRUM LABELING

TYPICAL

(lettering size and color as per guidelines)

D001



499545

PRECAUTIONARY LABELS
for
PROPRIETARY PRODUCTS

Drum Label*

Label Description: (see attached example)

material	- permanent vinyl
type	- "Crack & Peel"
size	- 8½ ± 1/16 x 11 ± 1/16"
color	- white
ink	- red on white as per attached example, this is the same crimson red as is used on DOT flammable liquid labels
print type	- silkscreen process
basic format	- as per attached example
specific directions	- supplied by WPS Product Development
specific precautionary wording	- supplied by Manufacturer/Vendor of specific product and approved by WPS Field Development

Label Manufacturer: the following Company has produced such labels.

Industrial Tape & Label, Inc.
7028 Burkett
P. O. Box 14206
Houston, TX 77021
(713) 748-3105

* To be supplied by Manufacturer/Vendor of product. This type label may be used on bags or other paper containers, in which case lesser quality paper labels are acceptable.

9 FEB 84
RWA
R-3D2(01/86)

6100 Western Place • P.O. Box 186 • Fort Worth, Texas 76101
Phone 817-232-7300 • TWX #910-893-4057

100472

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: September, 1984

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Proprietary blend	TRADE NAME AND SYNONYMS De-emulsifier, Nine-40
CHEMICAL FAMILY Surfactant	FORMULA W.I.N. 100472

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable Liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	Methanol
HAZARD CLASS	Flammable Liquid
IDENTIFICATION NUMBER	UN1993
D.O.T. LABEL(S) REQUIRED	Flammable Liquid
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
Xylene	2	100ppm
Methanol		200ppm
Isopropanol		400ppm
Heavy Aromatic Naphtha		100ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	162	SPECIFIC GRAVITY (H_2O=1)	0.881
VAPOR PRESSURE (mm Hg.)	200	PERCENT, VOLATILE BY VOLUME (%)	62
VAPOR DENSITY (AIR=1) @ 100°F	>5	EVAPORATION RATE (n-Butyl Acetate=1)	2.03
SOLUBILITY IN WATER	Dispersible		
APPEARANCE AND ODOR	light yellow liquid, hydrocarbon odor		

7.3#

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
52°F Seta CC-ASTM		0.8	36.0

EXTINGUISHING MEDIA
Dry chemical, foam, water spray or water fog

SPECIAL FIRE FIGHTING PROCEDURES
Use water spray to cool fire exposed surfaces and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Respiratory protection required for fire-fighting personnel.

(Continued on reverse side)

100472

1063 (9/82) R-6 (03/84) **INTER-OFFICE CORRESPONDENCE**

To Bob Slaughter. At FW - Accident Prevention

From Robert W. Anderson RWA At FW - Research & Development Center

Date 6 SEP 84

RE: Safety Information Update

This is to inform you of revisions, additions, deletions or replacement of products or chemicals and the relevant safety data.

Western Trade Name: NINE-40

Chemical Name (if not trade named): N/A W.I.N.: 100472

Addition __ Revision X Replacement X Deletion __ to product line

Western Product X Western System __

Cementing __ Stimulation X Used for Warehouse Blending Only __

DOT Proper Shipping Name & I.D. Number (SPM-04-02): Flammable liquid, n.o.s. contains methanol (UN1993)

DOT Hazardous Material Class: Flammable material

Label: Flammable liquid

Chemical Storage Class (SPM-04-01): II.1.

Chemical First Aid Guide Class (SPM-04-04):

Eyes * Lungs A Skin F Mouth T

EPA Hazardous Waste Classification: Ignitable waste, D001

Material Safety Data Sheet: Attached X Not Available ___

On File at Research X

Replace all previous information in your files on WZ-100472 with this new information on NINE-40.

cc: Product Specification File (original)
Legal Services

Attachments: MSDS
Label
Precautionary Statement

"Pursuing excellence in everything I do"

WESTERN PETROLEUM SERVICES
W.I.N. 100472

NINE-40

De-emulsifier

FLASH POINT: 52°F(11°C) SETAFLASH

DANGER!

EXTREMELY FLAMMABLE
MAY CAUSE FLASH FIRE
MAY CAUSE EYE BURNS
CAUSES SKIN IRRITATION ON PROLONGED CONTACT
MAY BE A SKIN SENSITIZER

MANUFACTURED FOR:
THE WESTERN COMPANY OF NORTH AMERICA
P. O. B[illegible]S
FORT WORTH, TEXAS 76101

BATCH NO.

MADE IN U.S.A.

PRECAUTIONS:

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME. DO NOT GET IN EYES. WEAR CHEMICAL SAFETY GOGGLES. AVOID CONTACT WITH SKIN OR CLOTHING. AVOID BREATHING MISTS OR VAPORS. USE WITH VENTILATION EQUAL TO UNOBSTRUCTED OUTDOORS IN MODERATE BREEZE. KEEP CONTAINER CLOSED. WASH THOROUGHLY AFTER HANDLING.

FIRST AID:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN. WASH SKIN WITH SOAP AND WATER.

*** D. O. T. PROPER SHIPPING NAME***

FLAMMABLE N. O. S.

FIRE FIGHTING:

USE WATERSPRAY TO COOL FIRE EXPOSED SURFACES AND PROTECT PERSONNEL. EXTINGUISH WITH DRY CHEMICAL OR ALCOHOL-TYPE FOAM. WATERSPRAY MAY BE INEFFECTIVE AS AN EXTINGUISHING AGENT.

USE INSTRUCTIONS:

FOR PROPER USE, REFER TO SERVICE BULLETIN NUMBER 552.0 WC
SPECIFIC USAGE
0.5-10.0 GAL/1000 GAL HCL, HCL/HF BLENDS, AND HCL/ACETIC ACID BLENDS.

NET CONTENTS: 55 U.S. GALLONS 208.2 LITERS

SPILL CONTROL:

KEEP PUBLIC AWAY. ELIMINATE SOURCES OF IGNITION. WARN OCCUPANTS OF DOWNWIND AREAS OF FIRE AND EXPLOSION HAZARD. SHUT OFF SOURCE IF POSSIBLE TO DO SO SAFELY. PREVENT LIQUID FROM ENTERING SEWERS, WATERCOURSES, OR LOW AREAS. ADVISE AUTHORITIES IF MATERIAL HAS ENTERED A WATERCOURSE OR SEWER OR HAS CONTAMINATED SOIL OR VEGETATION. CONTAIN SPILLED LIQUID WITH SAND OR EARTH, AND DILUTE WITH WATER. RECOVER BY PUMPING OR WITH SUITABLE ABSORBENT. CONSULT AN EXPERT ON DISPOSAL OF RECOVERED MATERIAL AND ENSURE CONFORMITY WITH LOCAL DISPOSAL REGULATIONS.

WARNING: EMPTY CONTAINER HAZARDOUS

OBSERVE ALL PRECAUTIONARY MEASURES ON THIS LABEL. CONTAINER MAY BE HAZARDOUS WHEN EMPTY. STORE EMPTY CONTAINERS AWAY FROM HEAT AND FLAME WITH DRUM PLUGS CLOSED. DO NOT CUT OR WELD. ENSURE COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS IN DISPOSING OF THIS CONTAINER, RESIDUAL CONTENTS, OR RINSING. TRIPLE RINSE CONTAINER AND OFFER FOR RECYCLING, RECONDITIONING, OR DISPOSAL IN AN APPROVED MANNER. ENSURE RECONDITIONERS, RECYCLERS, OR DISPOSAL ARE AWARE OF HAZARDS ASSOCIATED WITH CONTENTS.

100137

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Date: January 28, 1992

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5433
ADDRESS (Number, Street, City, State and ZIP Code) 515 Post Oak Blvd., Houston, Texas 77027	
CHEMICAL NAME AND SYNONYMS Proprietary Blend	TRADE NAME AND SYNONYMS De-Emulsifier, I-5
CHEMICAL FAMILY	FORMULA W.I.N. 100137

SECTION IA - HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable Liquid, Corrosive, N.O.S. (RQ /1780 gallons)
NAME OF HAZARDOUS COMPONENT	Methanol, Dehydroabietylamine
HAZARD CLASS	Flammable Liquid, Corrosive
IDENTIFICATION NUMBER	UN 2924
D.O.T. LABEL(S) REQUIRED	Flammable Liquid, Corrosive
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
Methanol (Skin) 67-56-1	< 35	200 ppm
Dehydroabietylamine	< 15	None established

SECTION III - PHYSICAL DATA

BOILING POINT (°F)		SPECIFIC GRAVITY (H_2O=1)	0.958
VAPOR PRESSURE (mm Hg) Estimated	< 5	PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)	> 1	EVAPORATION RATE (_____=1)	
SOLUBILITY IN WATER	Dispersible	pH: 5% of product	12.7 - 13.7

APPEARANCE AND ODOR Amber to brown liquid with alcoholic odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA Foam dry chemical, CO_2, water fog or spray

SPECIAL FIRE FIGHTING PROCEDURES Do not enter a fire area without proper protective equipment, including NIOSH/MSHA approved, self-contained breathing apparatus. Cool exposed containers with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS Material is flammable. Vapors are heavier than air and may travel along ground to ignition source and flash back. Never use welding or cutting torch on or near drums, even when empty. Explosion may result.

(Continued on next page)

TRADE NAME: W.I.N. 100137

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE Inhalation: Material is corrosive. Inhalation of vapor may cause severe irritation of respiratory system. Eye Contact: Eye contact may cause corneal damage resulting in permanently impaired vision. Skin Contact: Material is absorbed through skin and may cause systemic poisoning. Ingestion: May be harmful if ingested. See Attachment IXA.

EMERGENCY AND FIRST AID PROCEDURES Eye Contact: Flush eyes immediately with large amounts of water for at least 15 minutes. Call a physician if irritation persists. Inhalation: Remove immediately to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration, and call a physician. Skin Contact: Immediately wash skin with large amounts of water while removing contaminated clothing and shoes. Contact a physician. Discard clothing and shoes. Ingestion: DO NOT induce vomiting. If conscious, drink large amounts of water and contact a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Oxidizers, heat sparks or open flame

INCOMPATIBILITY (Materials to avoid) Oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS Carbon Monoxide

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED See Section IX

WASTE DISPOSAL METHOD See Section IX

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) As needed. If excursions above recommended level occur, half face organic vapor cartridge with dust/mist prefilter.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General) X	OTHER

PROTECTIVE GLOVES Chemical resistant gloves

EYE PROTECTION Goggles

OTHER PROTECTIVE EQUIPMENT

(Continued on next page)

100137

TRADE NAME: W.I.N. 100137

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Don appropriate protective clothing and respiratory protection prior to entering a spill/leak area. Eliminate ignition sources. Approach area upwind is possible. Shut off leak if it can be done safely. Dike and pump large spills into salvage containers. Soak up residue and small spills with absorbent clay, sand, or dirt and place in salvage containers. If RQ (reportable quantity) is exceeded, report to National Spill Response Office 1-800-424-8802. Also, in some jurisdictions, spills or leaks of any hazardous materials are reportable–consult local lead agencies for further information. Continue to observe precautions.

OTHER PRECAUTIONS Waste Disposal Method(s): Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures and processes may change the classification to non-hazardous, or hazardous for reasons other than, or in addition to product characteristics. Dispose of all waste and/or containers in accordance with federal, state and local regulations.

(Continued on next page)

100137

ATTACHMENT TO AND CONTINUATION OF

MATERIAL SAFETY DATA SHEET

Date: January 28, 1992

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5433
ADDRESS (Number, Street, City, State and ZIP Code) 515 Post Oak Blvd., Houston, Texas 77027	
CHEMICAL NAME AND SYNONYMS Proprietary Blend	TRADE NAME AND SYNONYMS De-Emulsifier, I-5
CHEMICAL FAMILY	FORMULA W.I.N. 100137

SECTION IXA - SPECIAL PRECAUTIONS

Methanol is a component of this product and can be absorbed through the skin and membranes. Exposure to high levels of airborne methanol can cause headaches, weakness, drowsiness, nausea, vomiting, drunkenness, irritation of the eyes, blurred vision, blindness and death. Chronic exposure to methanol can cause irreversible damage to the optic nerve, leading to permanently impaired vision.

Methanol (100%) Toxicity:

Oral hen LDLo = 340 mg/kg Inh hen TCLo = 86,000 mg/kg
Oral rat LD50 = 5628 mg/kg Inh rat LC50 = 64,000 mg/kg
Skn rabbit LD50 - 20,000 mg/kg Skn rabbit - 500 mg/24 hrs-mod irrit.

Dehydroabietylamine may cause severe eye injury resulting in eye burns and possible loss of vision. It will cause severe skin irritation. Prolonged skin contact may cause burns. Inhalation of mist may cause irritation of the nose and throat. Ingestion may cause severe injury to the mouth and gastrointestinal tract.

TARGET ORGANS (29 CFR 1910.1200-Appendix A):

Eye Hazard
Cutaneous Hazard (Skin)

(Continued on next page)

ATTACHMENT TO AND CONTINUATION OF

MATERIAL SAFETY DATA SHEET

Date: January 28, 1992

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5433
ADDRESS (Number, Street, City, State and ZIP Code) 515 Post Oak Blvd., Houston, Texas 77027	
CHEMICAL NAME AND SYNONYMS Proprietary Blend	TRADE NAME AND SYNONYMS De-Emulsifier, I-5
CHEMICAL FAMILY	FORMULA W.I.N. 100137

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

FIRST AID:

FOR EYES : In case of contact, flush with water for 15 minutes and call a physician.

FOR SKIN : In case of contact, flush with water for 15 minutes and call a physician. Launder clothes before reuse.

FOR INGESTION: If swallowed, drink large quantity of water and call a physician.

FOR INHALATION: If breathed in, remove to fresh air and call a physician. If breathing becomes irregular or stops, administer artificial respiration.

FOR HANDLING: Employees must wear rubber gloves, face shield or goggles. Rubber boots and apron,if possibility of contact during use exists.

ATTENTION!! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Do not cut, puncture, or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

100146

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 19 SEP 84

SECTION I

Supplier's Name: The Western Company of North America	EMERGENCY TELEPHONE NO.: (817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code): P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS: Proprietary Blend	TRADE NAME AND SYNONYMS: De-emulsifier, Aqua Flow
CHEMICAL FAMILY: resin	FORMULA: W.I.N.100146

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	Isopropanol
HAZARD CLASS	Flammable liquid
IDENTIFICATION NUMBER	UN 1993
D.O.T. LABEL(S) REQUIRED	Flammable liquid
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
Heavy aromatic petroleum solvent, mostly alklbenzenes except toluene and naphthalenes B.P. 350-750°F	7-15	200ppm
Methylisobutylcarbinol (skin)	2	25ppm
Isopropanol	75	400ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	84.4°C	SPECIFIC GRAVITY (H_2O=1) @ 21.1°C	0.848
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	Dispersible		
APPEARANCE AND ODOR	Dark liquid - alcoholic odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): 11.6°C (PMCC)	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA: Water, foam, dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus			
UNUSUAL FIRE AND EXPLOSION HAZARDS: Produces toxic fumes when burned			

(Continued on reverse side)

TRADE NAME: W.I.N. 100146, Aqua flow, DE-EMULSIFIER

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Not available

EFFECTS OF OVEREXPOSURE
Liquid is irritating to the eyes. May be harmful if swallowed or absorbed through the skin.

EMERGENCY AND FIRST AID PROCEDURES
Eyes: flush with water for 15 min. and get medical attention. Skin: wash skin thoroughly with soap and water. Launder clothing before re-use. Internal: drink large volumes of water, induce vomiting, call a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Keep away from heat and open flames.
	STABLE	XXX	

INCOMPATABILITY *(Materials to avoid)*
Avoid contact with strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS
None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	XXX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Extinguish all sources of ignition. Soak up on sand and dispose of in an approved industrial landfill.

WASTE DISPOSAL METHOD
Incinerate in an incinerator equipped with an afterburner and scrubber or bury in an approved industrial landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
None required in normal use

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES: rubber	EYE PROTECTION: Face shield or goggles

OTHER PROTECTIVE EQUIPMENT
rubber boots and apron

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid contact with eyes, skin and clothing. Avoid breathing vapors, store away from heat, sparks and open flames.

OTHER PRECAUTIONS
Do not transfer to improperly marked containers. Keep container closed when not in use.

WESTERN Processors

Western Petroleum Services

W.I.N. 100146

AQUA FLOW

DE-EMULSIFIER

Flash Point: 54°F PMCC
Net Contents: 374 lb(170 kg)
54 gal(204 L) @ 77°F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 550.0 WG

SPECIFIC USAGE: Use at a concentration of 3/4 to 1 gallon per 1000 gallons of water. Use at a concentration of 3 to 8 gallons per 1000 gallons of acid.

When Handling This Product Employees MUST WEAR: Face shield or goggles, rubber gloves, rubber boots, and apron.

FOR INDUSTRIAL USE ONLY

WARNING

HAZARDOUS LIQUID AND VAPOR, IF ABSORBED THROUGH SKIN OR INHALED. HARMFUL IF SWALLOWED.

Do not store near heat, sparks or flames. Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Do not transfer to improperly marked containers. Keep container closed when not in use.

FIRST AID: EYES: Flush with water for 15 minutes and get medical attention. SKIN: Wash skin thoroughly with soap and water. Launder clothing before re-use. INTERNAL: Drink large volumes of water and induce vomiting. Do not induce vomiting in unconscious person. Call a physician.

SPILL OR LEAK: Extinguish all sources of ignition. Soak up on sand and dispose of in an approved industrial landfill. Incinerate in an incinerator equipped with an afterburner and scrubber or bury in an approved industrial landfill.

FIRE FIGHTING: Use water, foam or dry chemical. Wear self-contained breathing apparatus. Produces toxic fumes when burned.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

NET CONTENTS: 374 lbs (170 kg)
54 gals (204 liters) @ 77°F

Batch no.

100196

*****D.O.T. PROPER SHIPPING NAME: Flammable liquid, n.o.s., contains isopropanol, UN1993 *****

100290

RECEIVED
JAN 23 1989
R.E.F.C.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 20MAR85

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS proprietary	TRADE NAME AND SYNONYMS DISPERSANT, IF-4
CHEMICAL FAMILY organic sulfonate	FORMULA W.I.N.100290

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	not regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
none		
NA = not available, N/A = not applicable		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	NA	SPECIFIC GRAVITY (H_2O=1)	NA
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	6.5
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER by weight	10%	>H @ 2% in H_2O	9-10
APPEARANCE AND ODOR tan powder, bland odor			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
not applicable	N/A		

EXTINGUISHING MEDIA
water sparay, CO_2, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES
Cool exposed containers with water spray. Self-contained breathing apparatus in confined areas.

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

TRADE NAME: W.I.N. 100290, DISPERSANT, TF-4

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
none established for product, LD_{50} (acute oral) = 3800mg/kg(rats)

EFFECTS OF OVEREXPOSURE
acute overexposure may result in skin, eye & respiratory tract irritation

EMERGENCY AND FIRST AID PROCEDURES
see Section X - Label Copy.

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		not applicable
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS
carbon monoxide and dioxide and oxides of sulfur

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		not applicable
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Shovel into labeled waste container for reuse or disposal. Wear adequate personal clothing and equipment.

WASTE DISPOSAL METHOD
Dispose of in an approved chemical waste landfill or incinerate in accordance with applicable Federal, State, and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
NIOSH/MSHA approved respirator, if necessary

VENTILATION		
	LOCAL EXHAUST: required	SPECIAL: N/A
	MECHANICAL *(General)*: if required	OTHER: N/A

PROTECTIVE GLOVES	EYE PROTECTION
rubber or plastic	chemical goggles or face shield

OTHER PROTECTIVE EQUIPMENT
standard work clothing and work shoes.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
store in dry place.

OTHER PRECAUTIONS
see Section X - Label Copy

100290

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

RECEIVED
JAN 23 1989
R.E.F.C.

DATE: 20MAR85

SECTION I	
Supplier's Name The Western Company of North America	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS proprietary	TRADE NAME AND SYNONYMS DISPERSANT,TF-4
CHEMICAL FAMILY organic sulfonate	FORMULA W.I.N.100290

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

CAUTION!

MAY CAUSE IRRITATION - Avoid contact with eyes, skin and clothing. Avoid breathing dust. Wear chemical splash goggles, gloves and protective clothing when handling. Use with adequate ventilation and employ respiratory protection where dust may be gnerated. Wash thoroughly after handling,

FIRST AID:

FOR EYES: In case of contact, Flush at once with large amounts of water for at least 15 minutes holding lids apart. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention.

FOR SKIN: In case of contact, Wash thoroughly with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. If irritation should develop, get medical attention.

FOR INGESTION: If swallowed, DO NOT induce vomiting. Give large amounts of water followed by a milk if available. If vomiting should occur spontaneously, keep airway clear. Get medical attention. Never give anything by mouth to an unconscious person.

FOR INHALATION: If breathed in, Remove to fresh air.

HANDLING: Employees must wear rubber or plastic gloves & goggles or face shield.

ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Donot cut, puncture or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

100275

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 1 Oct. 77

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
	Thrifty Lite
CHEMICAL FAMILY: silicate	FORMULA: Proprietary blend

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	

CAS: 1344-09-8

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	214-216°F	SPECIFIC GRAVITY (H_2O=1)	1.39-1.61
VAPOR PRESSURE (mm Hg.) 61.5°C	140.5-156.5	PERCENT, VOLATILE BY VOLUME (%)	70-80%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	Varies with time and temperature
SOLUBILITY IN WATER 20°C	100%		
APPEARANCE AND ODOR	Colorless soapy odored solid		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A	N/A		

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

(Continued on reverse side)

TRADE NAME: THRIFTY LITE

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Contact with skin or eyes.

EFFECTS OF OVEREXPOSURE

EMERGENCY AND FIRST AID PROCEDURES
Ingestion: call physician immediately.

Inhalation: Causes sneezing, call phusician.

Skin: Flush with water, apply petroleum jelly or cream

Eyes: Flush with water, call physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR		

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Flood to sewer.

WASTE DISPOSAL METHOD
Dilute waste silicate to less than 3% concentration & sewer.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Rubber or plastic	EYE PROTECTION Goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Do not store in nonferrous metal tanks.

OTHER PRECAUTIONS
Hydrogels are slippery, dry gels are abrasive.

100273

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 11 Sept. 78

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
	WE-1L
CHEMICAL FAMILY	FORMULA
	Proprietary Blend

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
None		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	214-216°F	SPECIFIC GRAVITY (H_2O=1)	1.39-1.61
VAPOR PRESSURE (mm Hg.) 61.5°C	140.5-156.5	PERCENT, VOLATILE BY VOLUME (%)	70-80%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____=1)	varies with time and temperature.
SOLUBILITY IN WATER 20°C	100%		
APPEARANCE AND ODOR	Colorless soapy odored liquid		

11.57

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A	N/A		

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

(Continued on reverse side)

TRADE NAME: WE-IL

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Contact with skin or eyes.

EFFECTS OF OVEREXPOSURE

EMERGENCY AND FIRST AID PROCEDURES
Ingestion: Call physician immediately.

Inhalation: Causes sneezing, call physician.

Skin: Flush with water. Apply petroleum jelly or cream.
Eyes: Flush with water. Call physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR		

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Flood to sewer.

WASTE DISPOSAL METHOD
Dilute waste silicate to less than 3% concentration and sewer.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Rubber or plastic	EYE PROTECTION Goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Do not store in nonferrous metal tanks.

OTHER PRECAUTIONS
Hydrogels are slippery, dry gels are abrasive.

100274

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

RECEIVED
JAN 23 1989
R.E.F.C.

DATE: March, 1985

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Attapulgite clay (Fuller's Earth)	TRADE NAME AND SYNONYMS Ataclay W.I.N. 100274
CHEMICAL FAMILY Natural mineral, extracted from earth	FORMULA $(H_2O)_4(OH)_2Mg_3Si_5OH_{20} \cdot 4H_3O$

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	
HAZARD CLASS	
IDENTIFICATION NUMBER	
D.O.T. LABEL(S) REQUIRED	
PRECAUTIONARY LABEL	

CAS: 8031-18-3

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	1.47
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	None
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	None
SOLUBILITY IN WATER	N/A		
APPEARANCE AND ODOR	Grey to reddish brown, granular, no odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA
No fire or explosion hazard.

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

(Continued on reverse side)

Form OSHA-20

TRADE NAME: W.I.N. 100274,EXTENDER,Ataclay

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
As specified in OSHA Standard 1910.93, Table G-3 for inert or nuisance dust.

EFFECTS OF OVEREXPOSURE
Repeated inhalation of dust in excess of threshold limit value over an extended period of time may result in injury to the lungs.

EMERGENCY AND FIRST AID PROCEDURES
None

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
None

WASTE DISPOSAL METHOD
Any - not hazardous

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Dust respirator in compliance with OSHA Standard 1910.134

VENTILATION		
	LOCAL EXHAUST: Follow OSHA Standards	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
Not necessary	Normal for dust

OTHER PROTECTIVE EQUIPMENT
None

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
None other than above.

OTHER PRECAUTIONS
None other than above.

NIOSH Recommended Standard

Attachment to MSDS: W.I.N. 100274, Ataclay

R-3F1(07/86)

I. RECOMMENDATIONS FOR A CRYSTALLINE SILICA STANDARD

The National Institute for Occupational Safety and Health (NIOSH) recommends that employee exposure to crystalline silica in the workplace be controlled by adherence to the following sections. The standard is designed to protect the health and safety of workers for up to a 10-hour workday, 40-hour workweek, over a working lifetime. Compliance with the standard should prevent adverse effects of crystalline silica on the health and safety of workers. The standard is measurable by techniques that are valid, reproducible, and available to industry and government agencies and are attainable with existing technology. The criteria and the standard recommended in this document will be subject to review and revision as necessary.

Crystalline silica, hereafter referred to in this document as free silica, is defined as silicon dioxide (SiO_2). "Crystalline" refers to the orientation of SiO_2 molecules in a fixed pattern as opposed to a nonperiodic, random molecular arrangement defined as amorphous. The three most common crystalline forms of free silica encountered in industry are quartz, tridymite, and cristobalite. Micro- and crypto-crystalline varieties of free silica, also included in the recommended standard, are composed of minute grains of free silica cemented together with amorphous silica and include tripoli, flint, chalcedony, agate, onyx, and silica flour. Other forms of free silica which, upon analysis, are found to have a crystalline structure as part of their composition are also subject to the recommended standard.

"Exposure to free silica" means exposure of the worker to an airborne concentration of free silica greater than half of the recommended environmental level in the workplace. Worker exposure at lower environmental concentrations will not require adherence to the following sections.

Section 1—Environmental (Workplace Air)

(a) Concentration

Occupational exposure shall be controlled so that no worker is exposed to a time-weighted average (TWA) concentration of free silica greater than 50 micrograms per cubic meter of air (50 $\mu g/cu\ m$; 0.050 $mg/cu\ m$) as determined by a full-shift sample for up to a 10-hour workday, 40-hour workweek.

(b) Sampling, Calibration, and Analysis

Exposure to free silica shall be determined by a personal (breathing zone) sample.

Procedures for sampling, calibration of equipment, and analysis of environmental samples shall be as provided in Appendices I and II, or by methods shown to be equivalent in sensitivity, accuracy, and precision to the method specified.

Section 2—Medical

(a) Medical examinations shall be made available to all workers subject to "exposure to free silica" prior to employee placement and at least once each 3 years thereafter. Examinations shall include as a minimum:

(1) A medical and occupational history to elicit data on worker exposure to free silica and signs and symptoms of respiratory disease.

(2) A chest roentgenogram (posteroanterior 14" by 17" or 14" by 14") classified according to the 1971 ILO International Classification of Radiographs of Pneumoconioses. [ILO U/C International Classification of Radiographs of Pneumoconioses 1971. Occupational Safety and Health Series 22 (rev). Geneva, International Labor Office, 1972]

(3) Pulmonary function tests including forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV_1) to provide a baseline for evaluation of pulmonary function and to help determine the advisability of the workers using negative- or positive-pressure respirators. It should be noted that pulmonary function tests may vary significantly in various ethnic groups. For example, in black persons, the test values for the FVC should be divided by 0.85 before the percentage value is compared with normal figures.

(4) Body weight.

(5) Height.

(6) Age.

(7) Initial medical examinations for presently employed workers shall be offered within 6 months of the promulgation of a standard incorporating these recommendations.

(b) Medical Management

An employee with or without roentgenographic evidence of silicosis who has respiratory distress and/or pulmonary functional impairment should be fully evaluated by a physician qualified to advise the employee whether he should continue working in a dusty trade.

(c) These records shall be available to the medical representatives of the Secretary of Health, Education, and Welfare, of the Secretary of Labor, of the employee or former employee, and of the employer.

(d) Medical records shall be maintained for at least 30 years following the employee's termination of employment.

Section 3 — Labeling (Posting)

(a) The following warning shall be posted to be readily visible at or near entrances or accessways to work areas where there is potential exposure to free silica.

WARNING!
FREE SILICA WORK AREA
Unauthorized Persons Keep Out

(b) The following warning shall be posted in readily visible locations in any work area where there is potential exposure to free silica.

WARNING!
FREE SILICA WORK AREA
Avoid Breathing Dust
May Cause Delayed Lung Injury (Silicosis)

The posting required under sections 3(a) and 3(b) shall be printed both in English and in the predominant language of non-English-speaking workers, unless they are otherwise trained and informed of the hazardous areas. Illiterate workers shall receive such training.

(c) The following warning label, in addition to or in combination with labels required by other statutes, regulations, or ordinances, shall be affixed to all new materials, mixtures, and other products containing more than 5% free silica, or to their containers.

WARNING!
CONTAINS FREE SILICA
DO NOT BREATHE DUST
May Cause Delayed Lung Injury (Silicosis)

Section 4 — Personal Protective Equipment and Work Clothing

Engineering controls shall be used to maintain free silica dust exposures below the prescribed limit. Subsection (a) shall apply whenever a variance from the standard recommended in Section 1 is granted under provisions of the Occupational Safety and Health Act, or in the interim period during the application for a variance. When the limits of exposure to free silica prescribed in paragraph (a) of Section 1 cannot be met by limiting the concentration of free silica in the work environment, an employer must utilize, as provided in subsection (a) of this section, a program of respiratory protection to effect the required protection of every worker exposed.

(a) Respiratory Protection

Appropriate respirators, as prescribed in Table I-1, shall be provided and used when a variance has been granted to allow respirators as a means of control of exposure to routine operations and while the application is pending. Administrative controls may also be used to reduce exposure. Respirators shall also be provided and used for nonroutine operations (occasional brief exposures above the environmental standard and for emergencies); however, for these instances a variance is not required but the requirements set forth below continue to apply. Appropriate respirators as described in Table I-1 shall only be used pursuant to the following requirements:

(1) For the purpose of determining the type of respirator to be used, the employer shall measure the atmospheric concentration of free silica in the workplace when the initial application for variance is made and thereafter whenever process, worksite, climate, or control changes occur which are likely to affect the free silica concentration. This requirement shall not apply when only atmosphere-supplying positive-pressure respirators are used. The employer shall ensure

TABLE I-1

REQUIREMENTS FOR RESPIRATOR USAGE AT CONCENTRATIONS ABOVE THE STANDARD

Concentrations of Free Silica in Multiples of the Standard	Respirator Type*
Less than or equal to 5X	Single use (valveless type) dust respirator.
Less than or equal to 10X	Quarter or half mask respirator with replaceable dust filter or single use (with valve) dust respirator.
	Type C, demand type (negative pressure), with quarter or half mask facepiece.
Less than or equal to 100X	Full facepiece respirator with replaceable dust filter.
	Type C, supplied air respirator, demand type (negative pressure), with full facepiece.
Less than or equal to 200X	Powered air-purifying (positive-pressure) respirator, with replaceable applicable filter.**
Greater than 200X	Type C, supplied air respirator, continuous flow type (positive pressure), with full facepiece, hood, or helmet.

*Where a variance has been obtained for abrasive blasting with silica sand, use only Type C continuous flow, supplied air respirator with hood or helmet.

**An alternative is to select the standard high efficiency filter which must be at least 99.97% efficient against 0.3-micrometer dioctyl phthalate (DOP).

that no worker is exposed to free silica in excess of the standard because of improper respirator selection, fit, use, or maintenance.

(2) Employees experiencing breathing difficulty while using respirators shall be evaluated by a physician to determine the ability of the worker to wear a respirator.

(3) A respiratory protective program meeting the requirements of Section 1910.134 of the Occupational Safety and Health Standards shall be established and enforced by the employer. [29 CFR 1910.134 published in the Federal Register, vol 39, page 23671, dated June 27, 1974, as amended]

(4) The employer shall provide respirators in accordance with Table I–1 and shall ensure that the employee uses the appropriate respirator.

(5) Respiratory protective devices in Table I–1 shall be those approved either under 30 CFR 11, published March 25, 1972, or under the following regulations:

(A) Filter-type dust, fume, and mist respirators—30 CFR 14 (Bureau of Mines Schedule 21B)

(B) Supplied air respirator—30 CFR 12 (Bureau of Mines Schedule 19B)

(6) A respirator specified for use in higher concentrations of free silica may be used in atmospheres of lower concentrations.

(7) Employees shall be given instruction on the use of respirators assigned to them, on cleaning respirators, and on testing for leakage.

(b) Work Clothing

Where exposure to free silica is above the recommended environmental limit, work clothing shall be vacuumed before removal. Clothes shall not be cleaned by blowing or shaking.

Section 5 — Informing Employees of Hazards from Free Silica

(a) Each employee exposed to free silica shall be apprised at the beginning of his employment or assignment to a free silica exposure area of the hazards, relevant symptoms, appropriate emergency procedures, and proper conditions and precautions for safe use or exposure. The employee shall be instructed as to availability of such information including that prescribed in (b) below. Such information shall be kept on file and shall be accessible to the worker at each place of employment where free silica is involved in unit processes and operations. Workers shall also be advised of the increased risk of impaired health due to the combination of smoking and free silica dust exposure.

(b) Information, to the extent applicable to free silica, as specified in Appendix III shall be recorded on U.S. Department of Labor Form OSHA–20, "Material Safety Data Sheet" (see Appendix III) or on a similar form approved by the Occupational Safety and Health Administration, U.S. Department of Labor.

Section 6 — Work Practices and Control Procedures

(a) Substitution

(1) Wherever a hazard of silicosis can be eliminated by a reasonable substitution of other less toxic materials for free silica, the substitution shall be made unless the silica sand has been so processed before use to make it nonrespirable such as by washing to remove fine particles. Examples of such substitution are the use of alumina instead of flint for china placing in potteries, and the substitution of a quartz-free grit in abrasive blasting.

(2) Uncontrolled abrasive blasting with silica sand is such a severe silicosis hazard that special attention must be given to this problem. Silica sand, or other materials containing more than 1% free silica, should be prohibited as an abrasive substance in abrasive blasting cleaning operations.

(b) Dust Suppression

Moisture shall be added where such addition can substantially reduce the exposure to airborne respirable free silica dust.

(c) Ventilation

Where a local exhaust ventilation and collection system is used, it shall be designed and maintained to prevent the accumulation or recirculation of free silica dust into the workplace. The total system shall be inspected periodically for efficiency of operation. In addition, necessary measures shall be taken to ensure that discharge outdoors will not produce a health hazard to humans, animals, or plants.

(d) General Housekeeping

(1) Cleaning by blowing with compressed air or dry sweeping shall be avoided and dustless methods of cleaning such as vacuuming or washing down with water shall be substituted.

(2) Emphasis shall be placed upon cleanup of spills, preventive maintenance and repair of equipment, proper storage of materials, and collection of dusts containing free silica. Sanitation shall meet the requirements of 29 CFR 1910.141 as amended.

Section 7 — Monitoring and Recordkeeping Requirements

Work environments where it has been determined, on the basis of a professional industrial hygiene survey or by the judgment of a compliance officer, that the workers' exposure does not exceed half of the standard shall not be considered to have exposure to free silica. Records of these surveys, including the basis for concluding that air levels are at or below half of the standard shall be maintained. Surveys shall be repeated when any process change indicates a need for reevaluation or at the discretion of the compliance officer. Requirements set forth below apply to areas in which there is "exposure to free silica."

Employers shall maintain records of the workers' exposure to free silica based upon the following sampling and recording schedules:

(a) In all monitoring, samples representative of the exposure in the breathing zone of employees shall be collected. An adequate number of samples shall be collected to permit construction of a full-shift exposure for every operation or process. The minimum number of time-weighted average determinations for an operation or process shall be based on the number

of workers exposed as provided in Table I–2 or as otherwise indicated by a professional industrial survey.

(b) The first work environment (breathing zone) sampling shall be completed within 6 months of the promulgation of a standard incorporating these recommendations.

(c) Work environment (breathing zone) samples shall be taken within 30 days after installation of a new process or process changes.

TABLE I–2
SAMPLING SCHEDULE

Number of Employees Exposed	Number of TWA Determinations
1–20	50% of the toal number of workers
21–100	10 plus 25% of the excess over 20 workers
Over 100	30 plus 5% of the excess over 100 workers

(d) Samples shall be collected and analyzed at least every 6 months in accordance with Appendices I and II for the evaluation of the workers' exposure with respect to the recommended standard.

(e) When monitoring of the workers' exposure indicates a free silica concentration in excess of the recommended standard, suitable controls shall be initiated to reduce the exposure level to or below the recommended standard. In such cases monitoring shall continue at 30-day intervals until two consecutive surveys indicate the recommended standard is no longer exceeded. Periodic review and evaluation of environmental and medical data shall be performed to determine the effectiveness of control measures.

(f) Records shall be maintained of medical examinations and all sampling schedules to include the sampling and analytical methods, type of personal protection devices, if any, in use at the time of sampling and the determined free silica dust concentration. Records shall be maintained for at least 30 years following termination of workers' employment. Each employee shall be able to obtain information on his exposure.

100317

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

September 26, 1978

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME (Marketing Agent)	EMERGENCY TELEPHONE NO.
GENERAL PORTLAND INC., Trinity North Division	214-387-4700

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 324, Dallas, Texas 75221

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Tan powder - ordorless	Fly Ash
CHEMICAL FAMILY: Fly Ash	FORMULA:

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS: Not Applicable			BASE METAL: N/A		
CATALYST: Not Applicable			ALLOYS: N/A		
VEHICLE: Not Applicable			METALLIC COATINGS: N/A		
SOLVENTS: Not Applicable			FILLER METAL PLUS COATING OR CORE FLUX: N/A		
ADDITIVES: Not Applicable			OTHERS		
OTHERS: Not Applicable					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
None		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	2.65
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	N/A		
APPEARANCE AND ODOR	Very fine dry powder (ordorless)		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
Inflammable	N/A		

EXTINGUISHING MEDIA: N/A

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	We do not have sufficient data to make objective statement. Material is generally considered safe, but there can be some health hazard in handling any material.
EFFECTS OF OVEREXPOSURE	
EMERGENCY AND FIRST AID PROCEDURES	

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	x	

INCOMPATABILITY *(Materials to avoid)* None

HAZARDOUS DECOMPOSITION PRODUCTS None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	x	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

No special steps required.

WASTE DISPOSAL METHOD

No special steps required.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* Dust filter.

VENTILATION	LOCAL EXHAUST x	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES None	EYE PROTECTION Safety glasses.

OTHER PROTECTIVE EQUIPMENT None

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING General precautions applicable to handling and storing fine dry (ordorless) powders.

OTHER PRECAUTIONS

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085 DIAL COMM 8*235-4085

MATERIALS INFORMATION SERVICES

No. 49

AMMONIUM BIFLUORIDE

Date June 1979

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: AMMONIUM BIFLUORIDE

OTHER DESIGNATIONS: Acid Ammonium Fluoride; Ammonium Hydrogen Fluoride; $(NH_4)HF_2$; GE D4Y18; CAS #001-341-497.

MANUFACTURER: Material available from several suppliers, including Harshaw Chemical Co, 1945 E. 97th St., Cleveland, OH 44106 Telephone: (216)721-8300

SECTION II. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Ammonium Bifluoride, $(NH_4)HF_2$	> 98	8-hr TWA
Ammonium Fluoride, NH_4F	< 2	2.5 mg F/m^3*
Free Hydrogen Fluoride, HF (MSDS #6)	<0.1	8-hr TWA 2 mg/m^3
Ammonium Silicofluoride, $(NH_4)_2SiF_6$	∿.05	No established TLV

*OSHA occupational exposure level for inorganic fluorides; also recommended by NIOSH (10-hr TWA) and ACGIH (1978). The compounds themselves have no established TLV's.

SECTION III. PHYSICAL DATA

Solubility in water, 20 C, g/100g water ------ 58.3 Molecular weight ---------- 57.04

Melting point, 1 atm ------ 125.6 C

Appearance & odor - White, deliquescent crystals (rhombic or tetrahedral) or flakes; no characteristic odor.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER
N/A	N/A	N/A	-	-

Extinguishing Media: Use media suitable for surrounding fire, use water spray to cool fire-exposed containers. Toxic fumes are emitted on heating.

Firefighters should wear protective clothing & self-contained breathing apparatus suitable for HF exposure.

SECTION V. REACTIVITY DATA

This acidic material is stable at room temperature in a closed container. It does not polymerize. It is hygroscopic at 50% relative humidity.

Upon heating or contact with acid or acid fumes, highly toxic HF fumes are given off.

This material etches glass and can corrode metal, especially when heated.

It generates heat on reaction with alkaline materials and emits ammonia.

GENERAL ELECTRIC

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W.I.N. 100142, INTENSIFIER, acid, Ammonium Bifluoride, AB-54

NO. 49

SECTION VI. HEALTH HAZARD INFORMATION

TLV 2.5 mg (F)/m^3 (See Sect.II)

This acidic material is corrosive to body tissues and toxic by inhalation or ingestion. The effects arise from the ready availability of HF and fluoride ion from this compound. It can cause burns of the skin or eyes. Acute ingestion of 3.75g (2.5g of fluoride ion) is estimated to be fatal for an adult. Excessive inhalation of dust, solution mist, or liberated HF (from contact with acidic material or by heating) is irritating and can be severely damaging to the respiratory passages and the lungs and can produce systemic effects.

Chronic effects from fluoride can include bone, ligament and tendon damage, mottling of the teeth, anemia, impairment of growth in the young worker.

FIRST AID:

Eye contact: Immediately flush eyes with plenty of running water for at least 15 minutes; then contact physician (an opthalmologist if available)!

Skin contact: Promptly wash affected areas with plenty of water and soap. Remove contaminated clothing. Get medical help.

Inhalation: Remove from exposure. Get medical help promptly. Keep warm and at rest.

Ingestion: If conscious, give lots of milk or water to drink to dilute. (Induce vomiting only if medical help or direction is not readily available.) Get medical help!

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel when significant spills occur. Exclude from spill area all except clean-up personnel who have approved protection against skin contact and inhalation hazards. Provide ventilation. Pick up solids promptly, avoiding dusting conditions, and place in an approved container with a tight closure for disposal or recovery. Liquid spills can be neutralized and absorbed with a mixture of slaked lime and soda ash (ammonia evolved!), then picked up for disposal. Thoroughly neutralize trace residues; then flush to drain with much water.

DISPOSAL: Neutralize scrap material with water and slaked lime. Allow to settle 24 hrs. Decant liquid and flush it to drain with much water (ammonia solution). Deposit the calcium fluoride-slaked lime residual solids in an approved landfill. Follow Federal, State and local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide general ventilation and local exhaust ventilation to meet TLV requirements. Approved self-contained or air-supplied respirators are used for nonroutine or emergency conditions where the TLV is exceeded.

Use rubber gloves, safety goggles and body protecting clothing in handling this material. When solutions are used and splashing is possible, face shields, aprons, boots, etc. may also be needed.

A safety shower and eyewash station must be readily available to the workplace.

Fluoride-contaminated work clothing must not be allowed to become a hazard to others, for example members of a workers family, laundry personnel, etc. Health and safety personnel must determine control practices to be used for work clothing.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store in tightly closed plastic, rubber or paraffin lined containers in a clean, cool, dry, well-ventilated, low fire hazard area, away from possible contact with acids or acid fumes and away from sources of heat. Inspect storage containers regularly.

Prevent skin contact. Avoid inhalation. Follow good hygienic practice to keep intake of fluorides low and prevent chronic effects. Wash well after using.

Workers exposed to fluorides should have a comprehensive, preplacement medical examination (including complete urinalysis) and biannual examinations thereafter, emphasizing musculoskeletal, pulmonary, GI tract, and kidney functions. Monitor fluoride exposure by periodic urinalysis.

DATA SOURCE(S) CODE: 2-7, 10-12, MSDS #6

APPROVALS: MIS, CRD

Industrial Hygiene and Safety

MEDICAL REVIEW: 12/79

Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

100142

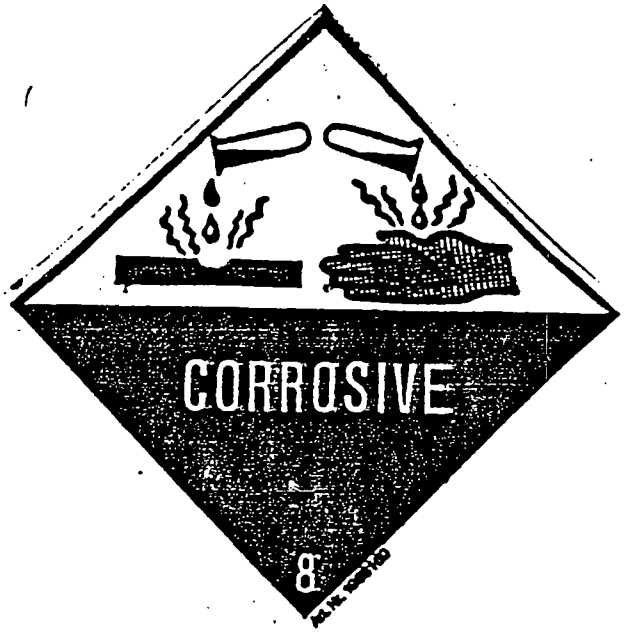
Precautionary Labeling for Bags

(Minimum requirements)

Trade Name: Ammonium Bifluoride, AB-54

W.I.N. 100142

When Handling This Product Employees MUST WEAR: face shield, rubber gloves, & dust mask



UN 1727
Net WT. 50 lb (22.7kg)
Lot No. _____

Reinspect on _____
mo/day/yr

WARNING!
CAUSES BURNS

AVOID: Prolonged or repeated contact with eyes and skin.
WASH: Thoroughly after handling and before eating or smoking. Do not take internally.
FIRST AID: Immediately flush eyes with plenty of water for at least 15 minutes.
Call a physician.
Flush skin with water.

499658

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Date: July 10, 1991

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5433
ADDRESS (Number, Street, City, State and ZIP Code) 515 Post Oak Blvd., Houston, Texas 77027	
CHEMICAL NAME AND SYNONYMS Organic Mixture	TRADE NAME AND SYNONYMS CF-19
CHEMICAL FAMILY Organic Mixture	FORMULA Proprietary W.I.N. 499658

SECTION IA - HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not Applicable (RQ /)
NAME OF HAZARDOUS COMPONENT	None
HAZARD CLASS	Not Applicable
IDENTIFICATION NUMBER	Not Applicable
D.O.T. LABEL(S) REQUIRED	None
PRECAUTIONARY LABEL	None

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
Not Applicable		

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	Not Established	SPECIFIC GRAVITY (H_2O=1)	1.66
VAPOR PRESSURE (mm Hg)	Not Established	PERCENT, VOLATILE BY VOLUME (%)	0
VAPOR DENSITY (AIR=1)	Not Established	EVAPORATION RATE (Ethyl Ether=1)	Not Established
SOLUBILITY IN WATER	Complete		

APPEARANCE AND ODOR: White powder and odorless

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	Not Established	FLAMMABLE LIMITS	N/A Lel	N/A Uel

EXTINGUISHING MEDIA: Dry chemical, foam or carbon dioxide

SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH/OSHA approved self-contained breathing apparatus. Water fog or spray may be used to cool exposed equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS: If in a finely divided and suspended state in air, treat as a flammable dust. CO_2 may be released when burned.

(Continued on next page)

TRADE NAME: W.I.N. 499658

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Total dust 15 mg/m^3, respirable fraction 5 mg/m^3 (OSHA).

EFFECTS OF OVEREXPOSURE: Eyes & Skin: Dust may cause mechanical irritation. Inhalation: May caused mild irritation to the nose, throat and upper respiratory tract. Ingestion: Large amount may cause gastrointestinal upset, nausea and vomiting.

EMERGENCY AND FIRST AID PROCEDURES: Eye: Flush eyes with water for at least 15 minutes. If irritation develops, seek medical attention. Skin: Wash skin with soap and water. If irritation develops, seek medical attention. Inhalation: If breathing is difficult, give oxygen. If breathing ceases, administer CPR followed by oxygen. Seek medical attention. Ingestion: Give two (2) glasses of water and induce vomiting only if subject is conscious.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID	Not Applicable
	STABLE	X		

INCOMPATABILITY (Materials to avoid): Not Applicable

HAZARDOUS DECOMPOSITION PRODUCTS: Not Established

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID	Not Applicable
	WILL NOT OCCUR	X		

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Shut off source and contain spill. If concentration of finely divided dust is high, wet down. Otherwise, avoid wetting spill. Wet material becomes very slippery. Absorb wet spill in dry, inert material (sand, sawdust, etc.). Sweep up and place in disposal container.

WASTE DISPOSAL METHOD: Incinerate or place in permitted waste management facility.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type): Use NIOSH/MSHA approved air respirator.

VENTILATION	LOCAL EXHAUST	X	SPECIAL	
	MECHANICAL (General)		OTHER	

PROTECTIVE GLOVES: Use impervious gloves

EYE PROTECTION: Safety glasses with side shields

OTHER PROTECTIVE EQUIPMENT: None

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid breathing dust. Avoid contact with eyes or skin. Wear protective equipment. Wash thoroughly after handling. Use adequate ventilation.

OTHER PRECAUTIONS

100267

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: Revised Jan. 85

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Proprietary blend	Fluid loss agent, Cement, CF-2
CHEMICAL FAMILY	FORMULA
Cellulose Ether	WIN-100267

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		N/A	SPECIFIC GRAVITY (H_2O=1)	1.34
VAPOR PRESSURE (mm Hg.)		N/A	PERCENT, VOLATILE BY VOLUME (%)	5% MAX
VAPOR DENSITY (AIR=1)			EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	25%	complete		
APPEARANCE AND ODOR	White free-flowing powder - odorless			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A			

EXTINGUISHING MEDIA
Water, CO_2, foam, dry chemical

SPECIAL FIRE-FIGHTING PROCEDURES
None

UNUSUAL FIRE AND EXPLOSION HAZARDS
Treat as a flammable dust in the finely divided and suspended state.

(Continued on reverse side)

TRADE NAME: CF-2 100267

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Treat as inert or nuisance dust (TLV 15 mg/m^3)

EFFECTS OF OVEREXPOSURE
None

EMERGENCY AND FIRST AID PROCEDURES
None

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Mechanical clean-up for reuse or disposal. Floors subject to dusting with this product can be slippery when wet.

WASTE DISPOSAL METHOD
Landfill

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Mask for nuisance dust recommended.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION Recommended

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Store in sealed containers in a dry place away from heat or sunlight.

OTHER PRECAUTIONS

WESTERN
Pacesetters

Western Petroleum Services

W.I.N. 100267

CF-2

FLUID LOSS AGENT

Emergency Phone Numbers:

(817) 731-5100 or 731-5433

50 Lb Net **22.7 Kg**

Manufactured For

The Western Company
of North America
P.O. BOX 186
FORT WORTH, TEXAS 76101

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No. 2270.0

SPECIFIC USAGE: Use at the rate of ¼ to 1¼% B.O.W.C.

SAFETY INFORMATION

HANDLING PRECAUTIONS – FIRST AID RECOMMENDATIONS

Skin & Eye Contact - Notice: May be irritating to skin and eyes. To remove from skin and eyes, wash with plenty of water. Consult a physician if irritation develops.

Inhalation – Notice: May be irritating to respiratory tract. If inhaled, move to fresh air. Consult a physician if irritation develops.

PROTECTIVE EQUIPMENT

Safety glasses; impervious gloves; nuisance dust mask if use causes dusting.

SPILL CLEANUP/WASTE DISPOSAL

Observing noted special precautions, pick up spilled material and containerize. Vacuum or sweep area to remove residues. Use water with caution; product becomes slippery when wet.

This product, if disposed of as shipped, is not a hazardous waste as defined in 40 CFR 261. Dispose of in an approved landfill in accordance with state and local regulations.

FIRE EXTINGUISHING MEDIA

Water, CO_2, Foam, Dry Chemical

SPECIAL PRECAUTIONS

Powders may form explosive mixtures with air. Do not store or handle in the presence of heat or an ignition source. Do not allow powder or dust to accumulate in work or storage areas.

Product becomes slippery when wet.

Refer to MSDS and SPM-04-04 for additional Safety Information.

7/87

For Industrial Use Only

DOT HAZARD CLASS – NOT RESTRICTED

HAZARD CLASSIFICATION			
Health	Fire	Reactivity	Specific
1	1	0	–

100267

100118

Form Approved
Budget Bureau No. 44-R1387
Approval Expires April 30, 1971

Form No. LSB-OOS-4
May 1969

U.S. DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

January 12, 1978

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
Hercules Inc.	
ADDRESS (Number, Street, City, State, and ZIP Code) 900 Market Street, Wilmington, DE 19899	
CHEMICAL NAME AND SYNONYMS Sodium carboxymethyl hydroxyethyl cellulose	TRADE NAME AND SYNONYMS Diacel® LWL (CMHEC)
CHEMICAL FAMILY cellulose ether	FORMULA $H_2(C_6H_9O_4)_x(C_2H_2O_3Na)_y(C_2H_4O)_z(OH)_{1-y}$

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Note: As we interpret the Occupational Safety and Health		
Act of 1970, this product should not be considered		
hazardous.		

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	DNA	SPECIFIC GRAVITY (H_2O=1)	1.6
VAPOR PRESSURE (mm Hg.)	DNA	PERCENT VOLATILE BY VOLUME (%)	DNA
VAPOR DENSITY (AIR=1)	DNA	EVAPORATION RATE (_____=1)	DNA
SOLUBILITY IN WATER	Complete		
APPEARANCE AND ODOR	Ivory colored powder		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES	Section IV - DNA		
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Treat as inert or nuisance particulate
EFFECTS OF OVEREXPOSURE	None
EMERGENCY AND FIRST AID PROCEDURES	Treat dust particles in eye as any other foreign body by washing with running water. No emergency procedures necessary in other forms of contact.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID	None
	STABLE	X		
INCOMPATABILITY *(Materials to avoid)*	None			
HAZARDOUS DECOMPOSITION PRODUCTS	None			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID	None
	WILL NOT OCCUR	X		

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	Sweep up spilled material and dispose by dumping, incineration; in solution, flush with water to sewer or waste treatment facility.
WASTE DISPOSAL METHOD	Dispose according to local, state and federal regulations

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*	NA			
VENTILATION	LOCAL EXHAUST	NA	SPECIAL	NA
	MECHANICAL *(General)*	NA	OTHER	NA
PROTECTIVE GLOVES	NA	EYE PROTECTION		NA
OTHER PROTECTIVE EQUIPMENT	NA			

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	No precautionary labeling. To protect product quality, store in sealed containers in dry place away from heat or sunlight.
OTHER PRECAUTIONS	

499508

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: March 1985

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS: Proprietary Blend	TRADE NAME AND SYNONYMS: Fluid Loss Agent, Cement, CF-14
CHEMICAL FAMILY	FORMULA: W.I.N. 499508

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not Regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	Non-Hazardous
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
N/A		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	N/A
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	2.5% max
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	Complete		
APPEARANCE AND ODOR	Solid		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A	N/A		

EXTINGUISHING MEDIA: Foam, dry chemical, CO_2, water spray or fog.

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable dust when finely divided and suspended in air.

(Continued on reverse side)

499508

TRADE NAME: Fluid Loss Agent, Cement, CF-14

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Treat as an inert or nuisance dust. 15mg/m^3 for total dust; Not established. 5mg/m^3 for respirable dust.

EFFECTS OF OVEREXPOSURE None known

EMERGENCY AND FIRST AID PROCEDURES None required

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Avoid creating dust clouds that may be ignited.

INCOMPATABILITY *(Materials to avoid)* Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS Oxides of sulphur, CO and CO_2 on burning.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Vacuum or sweep up and place in waste container for disposal. Provide adequate ventilation to spill area to avoid creating explosive concentrations of dust. Mop area of spill with plenty of water.

WASTE DISPOSAL METHOD Landfill or incinerate in accordance with applicable local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* Nuisance dust respirator approved by NIOSH/OSHA in excessive air concentrations.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)* Satisfactory	OTHER Adequate to control nuisance particulate

PROTECTIVE GLOVES Cloth gloves	EYE PROTECTION Goggles

OTHER PROTECTIVE EQUIPMENT None

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Surfaces subject to spills or dusting with this product can become slippery when wet. Store in a dry place away from heat and sunlight.

OTHER PRECAUTIONS

499508

Precautionary Labeling for Bags

Trade Name: CF-14

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s)

SPECIFIC USAGE: Fluid Loss Agent

When Handling This Product Employees MUST WEAR: Gloves, goggles, nuisance respirator

FOR INDUSTRIAL USE ONLY

CAUTION! Flammable dust when finely divided and suspended in air. Surfaces subject to spills or dusting with this product. Can become slippery when wet. Keep away from heat, sparks, and open flame. Use with adequate ventilation. Keep floors clean.

Refer to MSDS and SPM-04-04 for Safety Requirements.

499508

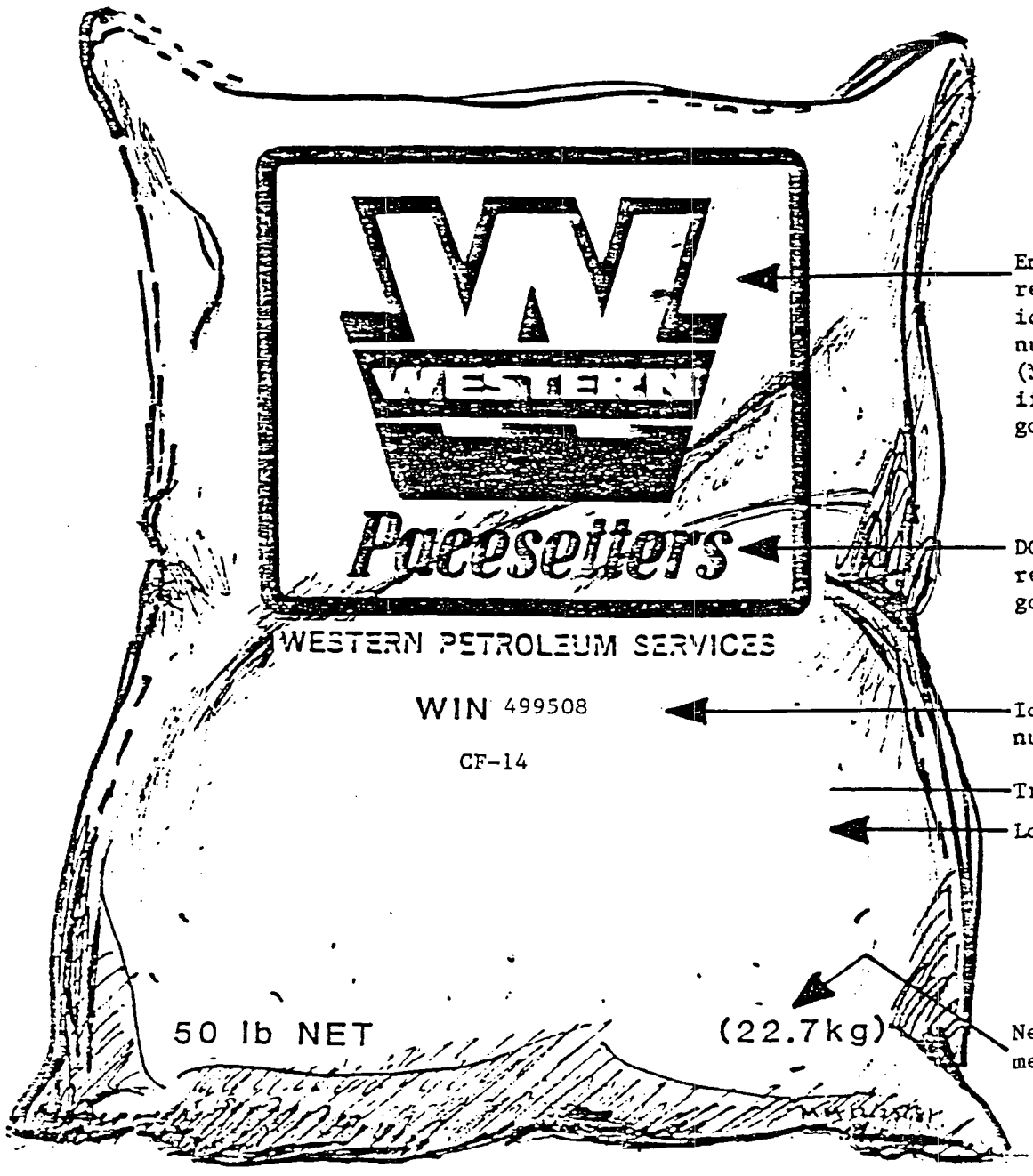
RECOMMENDED

BAG LABELING

TYPICAL

FRONT

(lettering size and color as per guidelines)



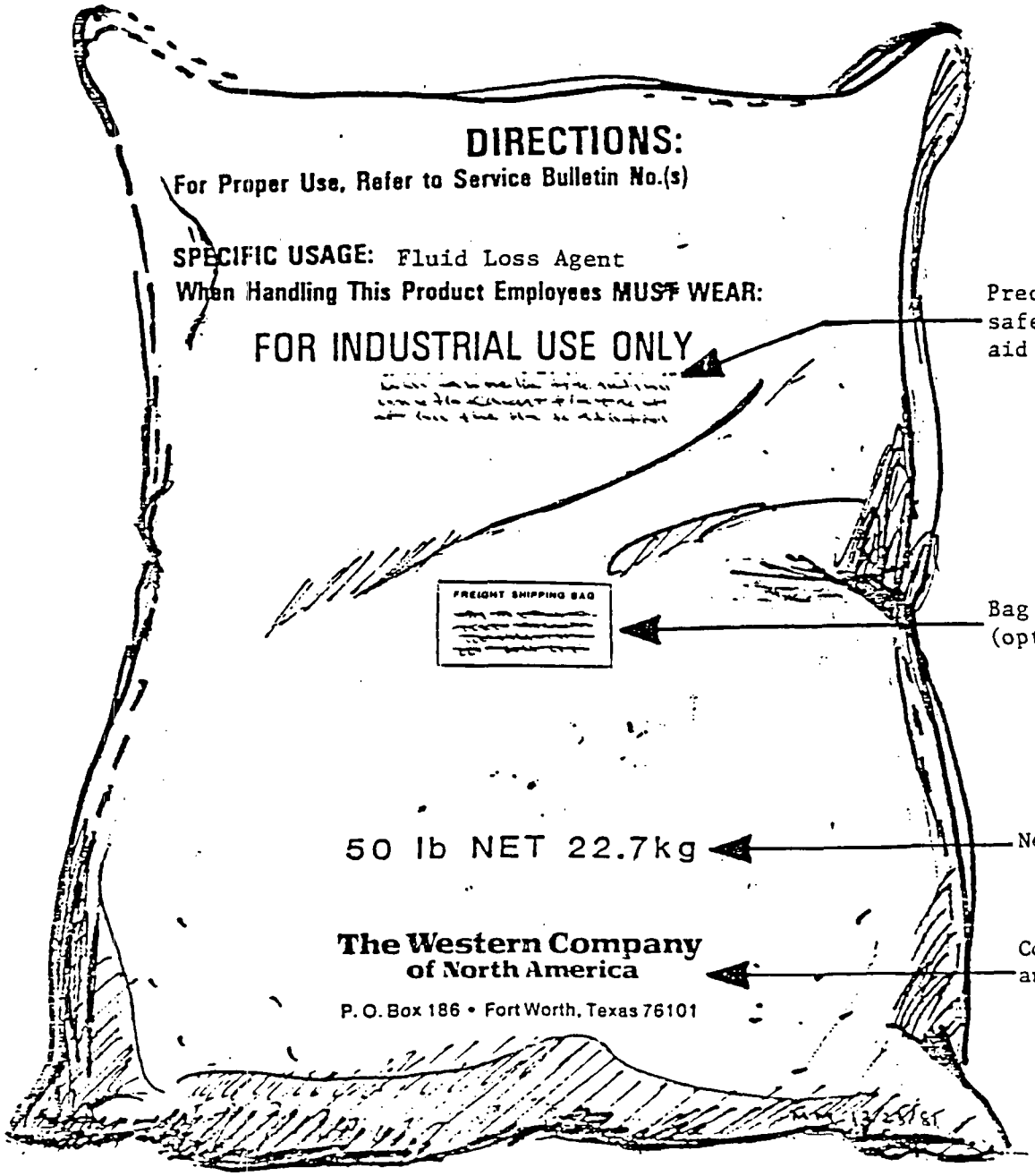
BAG LABELING

TYPICAL

BACK

(lettering size and color as per guidelines)

499508



100393

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: June 29, 1981

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Proprietary Formulation	Flo-Lok 1 Additive
CHEMICAL FAMILY: Proprietary Formulation	FORMULA: —

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	
HAZARD CLASS	
IDENTIFICATION NUMBER	
D.O.T. LABEL(S) REQUIRED	
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
Pigments	0.008	
According to suppliers interpretaion of the Occupational Safety and		
Health Act of 1970, this material should not be considered hazardous.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	1.68
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	8 max
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	50 wt.%		
APPEARANCE AND ODOR	white to off-white granular and fibrous powder. Slight odor.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	N/A	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA	Water, CO_2, dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES	None			

UNUSUAL FIRE AND EXPLOSION HAZARDS
Treat as flammable dust in the finely divided and suspended state. Explosive concentration and ignition temperature has not been determined.

(Continued on reverse side)

TRADE NAME:

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Treat as inert or nuisance dust (TLV 15 mg/M^3)
EFFECTS OF OVEREXPOSURE	None
EMERGENCY AND FIRST AID PROCEDURES	
	Eyes - wash
	Skin - wash

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	None
INCOMPATABILITY *(Materials to avoid)*			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Sweep up bulk of material and vacuum the remainder. Disperse by dumping or inceneration.

WASTE DISPOSAL METHOD
Dispose of according to local, state, and federal regulations for non-hazardous bio-degradable powder.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Mask for nusisance dust recommended.

VENTILATION	LOCAL EXHAUST: Exhaust Fan	SPECIAL: Not Applicable
	MECHANICAL *(General)*: Not applicable	OTHER: Not Applicable

PROTECTIVE GLOVES: Not Applicable	EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT	

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
To protect product quality, store in sealed container in a dry place away from heat or sunlight.

OTHER PRECAUTIONS
None

499520

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 15JUL85

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code): P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Proprietary Blend	Gelling Agent, Acigel
CHEMICAL FAMILY: Acrylamide Copolymer	FORMULA: W I N 499520

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not Regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
paraffin oil CAS: 8012-95-1		

8.99

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212°F	SPECIFIC GRAVITY (H_2O=1) @ 60°F	1.08
VAPOR PRESSURE (mm Hg.)	No Data	PERCENT, VOLATILE BY weight % @ 75°F	44
VAPOR DENSITY (AIR=1)	No Data	EVAPORATION RATE (_____ =1)	-----
SOLUBILITY IN WATER	Polymer Soluble in Water at pH ≤ 7		
APPEARANCE AND ODOR	Milky white liquid, Sweet odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
None, flames out @ 52°C(125°F) PMCC			

EXTINGUISHING MEDIA: carbon dioxide, dry chemical, alcohol foam

SPECIAL FIRE FIGHTING PROCEDURES: none

UNUSUAL FIRE AND EXPLOSION HAZARDS: none

(Continued on reverse side)

TRADE NAME: W.I.N. 499520, Gelling Agent, acid, Acigel

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: None established for the product

EFFECTS OF OVEREXPOSURE: May cause irritation with prolonged contact

EMERGENCY AND FIRST AID PROCEDURES: Eyes: Flush with water for 15 minutes. Call a physician.

Skin: Wash thoroughly with soap and water.

Ingestion: Do not induce vomiting. Give water. Call a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: none
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS: oxides of nitrogen

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Contain with absorbent material.

WASTE DISPOSAL METHOD: No special method. Consult local, state, and federal regulations for appropriate disposal methods. This product is not regualted under RCRA.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*: None normally required.

VENTILATION	LOCAL EXHAUST: X	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES: synthetic

EYE PROTECTION: chemical goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: none

OTHER PRECAUTIONS: Do not take internally. Avoid eye and prolonged skin contact.

WESTERN
Paceseltters

Western Petroleum Services

W.I.N. 499520

ACIGEL

Acid Gellant

Net Content: 498 lb(226 kg)
55 gal(208 L)@60°F

DIRECTIONS:

For Use, Refer to Service Bulletin No.(s) 683.0

SPECIFIC USAGE: Use at the rate of 1 to 60 gal/1000 gal of acid.

FOR INDUSTRIAL USE ONLY

CAUTION!

Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.
Keep container closed.
Avoid breathing vapor. Use with adequate ventilation.
At elevated temperatures this product may burn.
Use foam, dry chemical or CO_2.

FIRST AID:
FOR EYES: In case of contact, immediately wash with water for at least 15 minutes. Call physician.
FOR SKIN: In case of contact, wash thoroughly with water. Wash clothing before re-use.

HANDLING: Employees must wear chemical goggles, plastic gloves.

ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precuations listed for this product. Donot cut, puncture or weld on or near this container.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

Batch no.

*****D.O.T. PROPER SHIPPING NAME: Not Regulated*****

499520

499541

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

RECEIVED
JAN 23 1989
R.E.F.C.

DATE: 16 MAY 86

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS guar gum	TRADE NAME AND SYNONYMS GELLING AGENT, water, J-4
CHEMICAL FAMILY galacto mannan gum	FORMULA W.I.N. 499541

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	not regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV * (Units)
guar gum CAS No. [9000-30-0] Acute oral LD_{50} (rats) >5 g/kg	98	15 mg/m^3 tot
proprietary buffering agents	2	5 mg/m^3 respirable
* Limits based on nuisance dust/particulate values, OSHA PEL		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	~1.3
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE by weight	9
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	forms gels		
APPEARANCE AND ODOR	off-white powder, bean like odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
solid - not applicable	see Section IXA		

EXTINGUISHING MEDIA
Use water, carbon dioxide, dry chemical or foam.

SPECIAL FIRE FIGHTING PROCEDURES
Wear self-contained positive pressure breathing apparatus and full fire fighting protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS see Section IXA on page 3

(Continued on reverse side)

TRADE NAME: W.I.N. 499541, GELLING AGENT, water, J-4

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
OSHA PEL is based on nuisance dust/particulate values.

EFFECTS OF OVEREXPOSURE
Ingestion-Practically non-toxic. Inhalation-Dust may produce a respiratory allergemic response and/or irritation in some individuals. Eye-Product may cause eye injury or irritation which may persist for several days. Skin-Essentially non-irritating and not considered a sensitizer by skin contact based on laboratory animal tests. Like many organic dusts, prolonged or repeated skin contact may produce irritation.

EMERGENCY AND FIRST AID PROCEDURES see Section IXA on page 3

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Fire, excessive heat
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*: none known

HAZARDOUS DECOMPOSITION PRODUCTS: carbon dioxide, carbon monoxide

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Avoid creating dust clouds and breathing dust. Wet material is slippery. Dry Powder- Carefully scoop up or vacuum and place in disposal container. Wet Material- Dike spill to prevent spreading. Absorb with inert material, collect and place in disposal container. Flush area with water to remove any residue; direct washings to sanitary sewer (if permitted).

Dispose in local sanitary landfill in accordance with federal, state and local regulations. This product as shipped is not defined by the US EPA as a hazardous waste under RCRA.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Use with adequate ventilation. NIOSH approved dust or air-line respirators will be used where ventilation is inadequate.

VENTILATION	LOCAL EXHAUST: Recommended when appropriate to control exposure.	SPECIAL: -----	
	MECHANICAL *(General)*: Not recommended as a sole means of control.	OTHER: none required	

PROTECTIVE GLOVES: impervious gloves	EYE PROTECTION: safety glasses

OTHER PROTECTIVE EQUIPMENT: safety shower and eyewash facility

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Store in dry place. Keep container closed to avoid moisture pickup. Practice reasonable care and cleanliness. Avoid creating dust clouds and breathing dust.

OTHER PRECAUTIONS
Treat this material as a nuisance dust or particulate in accordance with the recommendations of ACGIH and in compliance with OSHA PEL.

49954/

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

DATE: 16 MAY 86

SECTION I	
Supplier's Name The Western Company of North America	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS guar gum	TRADE NAME AND SYNONYMS GELLING AGENT, water, J-4
CHEMICAL FAMILY galacto mannan gum	FORMULA W.I.N. 499541

SECTION IXA - - SPECIAL PRECAUTIONS

Unusual Fire and Explosion Hazards (from page 1)

Like all dry carbohydrate and most dry organic chemicals, guar gum dust carries a potential explosion hazard if the dust concentration in the air is too high. Good housekeeping procedures are required to reduce this potential hazard. The following are data taken from tests run for Celanese on guar and guar derivatives.

	Guar Gum	Guar Derivatives
Minimum Oxygen Concentration (%)	19	18
Minimum Ignition Engergy (mJ)	840	40,000(1)
Minimum Ignition Temperature: Cloud (°F)	950	950
Layer (°F)	420	390
Minimum Explosive Concentration ($oz./ft.^3$)(2)	.8	.29

(1) This material would not ignite at energies up to 40 joules, the highest tried. The material would ignite when subjected to a 24 watt continuous arc.

(2) In larger vessels explosions may occur at lower dust concentrations.

Emergency and First Aid Procedures (from page 2)

EYE (contact)	Fluid with large amounts of water for at least 15 minutes. If any irritation persists, seek medical attention.
SKIN (contact)	Wash with soap and water. If any irritation occurs, seek medical attention.
INGESTION (swallowing)	If large quantities are swallowed, seek medical attention.
INHALATION (breathing)	In case of exposure to high concentration of dust, remove to fresh air. Restore breathing. Seek medical attention.
OTHER HEALTH HAZARDS	No specific information available.

R-3G2(01/86)

Precautionary Labeling for Bags

W.I.N.: 499541

Trade Name: J-4

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 651.0

SPECIFIC USAGE: Gelling - Use at the rate of 20-80 lb/1000 gal water, acid or brine. Friction Reduction - Use at the rate of 10-30 lb/1000 gal.

When Handling This Product Employees **MUST WEAR:** Safety glasses, gloves, dust mask.

FOR INDUSTRIAL USE ONLY

CAUTION!

* Dust may be irritating or allergenic to the respiratory tract.
* Wet material will become slippery.
* High concentrations of airborne dust may be explosive in the presence of an ignition source.
* Avoid creating dust clouds and breathing dust.
* Avoid contact with eyes and prolonged or repeated contact with skin.
* Keep container closed when not in use to avoid moisture pick up.

FIRST AID ACTION:

* Skin Contact: Wash skin thoroughly with plenty of water.
* Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Contact a physician.

SPILLS:

* Dry: Sweep up and put in disposal container, avoid dust generation. Eliminate ignition source.
* Wet: Absorb with inert material, shovel up and put in disposal container. Thoroughly flush area with plenty of water to remove sliperiness. Direct washing towards sanitary sewers (if permitted).

WASTE DISPOSAL:

* Dispose in local sanitary landfill in accordance with federal, state and local regulations.

Emergency Telephone: (817) 731-5100 or (817) 731-5433

Refer to MSDS and SPM-04-04 for Safety Requirements

499617

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

EHS

Date: July 25, 1991

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5433
ADDRESS (Number, Street, City, State and ZIP Code) 515 Post Oak Blvd., Houston, Texas 77027	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS I-8A
CHEMICAL FAMILY	FORMULA W.I.N. 499617

SECTION IA - HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Corrosive Liquid, n.o.s.	(RQ 200 lbs)	Thiourea
NAME OF HAZARDOUS COMPONENT	Hydrochloric Acid		
HAZARD CLASS	Corrosive		
IDENTIFICATION NUMBER	UN 1760		
D.O.T. LABEL(S) REQUIRED	Corrosive		
PRECAUTIONARY LABEL			

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
Thiourea 62-56-6	1-5	None
Formaldehyde 50-00-0	< 1	1 ppm*
Orthotoluidine	< 1	2 ppm (skin)
Substituted Triazine	40-50	None
Hydrochloric Acid	> 15	C-5 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	> 212°F	SPECIFIC GRAVITY (H_2O=1)	1.06-1.08
VAPOR PRESSURE (mm Hg)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____=1)	
SOLUBILITY IN WATER	Complete		
APPEARANCE AND ODOR	Aromatic odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	None	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA	Carbon dioxide, water, foam or dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES	Wear positive pressure self-contained breathing apparatus and full protective clothing.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	None			

(Continued on next page)

TRADE NAME: W.I.N. 499617

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE Inhalation: Inhalation of mist can cause injury (burns) to the respiratory tract. Ingestion: Toxic. Can cause shock and loss of consciousness. May be fatal if swallowed. Eyes: Contact with eyes can cause burns and eye damage. Skin: Contact with skin can cause burns. May cause allergic skin reaction/dermatitis. Chronic: Contains O-Toluidine – may cause cyanosis, abnormal blood forming system function with anemia or red blood cell destruction. CARCINOGENICITY: Formaldehyde: Listed by the International Agency for Research of Cancer as a probable carcinogen to humans on the basis of animal evidence, but human data is inadequate (IARC Group 2B). Listed by the National Toxicology Program as reasonably anticipated to be carcinogenic. Listed by ACGIH as an A2 Industrial Substance Suspect of Carcinogenic Potential for Man. O-Toluidine: Listed by the International Agency for Research on Cancer (IARC Group 2A) as a probable carcinogen to humans on the basis of at least limited human data. Listed by the National Toxicology Program as reasonably anticipated to be carcinogenic. Listed by the ACGIH as an Industrial Substance of Carcinogenic Potential for Man. Thiourea: Listed by the International Agency for Research on Cancer (IARC Group 2B). Listed by the National Toxicology Program (NTP) as an anticipated human carcinogen.

EMERGENCY AND FIRST AID PROCEDURES Eyes: Immediately flush eyes in a directed stream of water for at least 15 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. GET MEDICAL ATTENTION. Skin: Immediately remove contaminated clothing and shoes. Flush skin thoroughly with water for at least 15 minutes. Rinse clothing. If irritation persists, GET MEDICAL ATTENTION. Ingestion: DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION. (Medical personnel – use cautious lavage to avoid aspiration.) Inhalation: Remove to fresh air and remove contaminated clothing. If breathing is difficult, administer oxygen. If respiration stops, give mouth to mouth resuscitation. GET MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID Keep from freezing.
	STABLE	X	

INCOMPATABILITY (Materials to avoid) Alkalies, strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID None known.
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Wear protective clothing. Dike to contain spill. Absorb or otherwise collect spill and place in suitable drum for disposal.

WASTE DISPOSAL METHOD Either incinerate or put in a landfill with approval of regulatory agency.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

VENTILATION	LOCAL EXHAUST	X	SPECIAL	
	MECHANICAL (General)		OTHER	

PROTECTIVE GLOVES Neoprene or polyvinyl gloves and appropriate protective clothing

EYE PROTECTION Chemical goggles or face shield

OTHER PROTECTIVE EQUIPMENT NIOSH approved respirator where TLV/PEL may be exceeded. Eye wash station should be in close proximity.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Protect from freezing. Do not get in eyes, on skin or clothing. Material is toxic. Use with adequate ventilation. Avoid breathing vapors.

OTHER PRECAUTIONS Wash thoroughly after handling. For industrial use only.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

499618

MATERIAL SAFETY DATA SHEET

DATE: 17FEB86

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Acetylenic alcohols, amine quats, methanol	TRADE NAME AND SYNONYMS INHIBITOR, acid, I-10D
CHEMICAL FAMILY amines and acetylenic alcohols	FORMULA W.I.N. 499618

SECTION IA - HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	flammable liquid, corrosive, n.o.s.
NAME OF HAZARDOUS COMPONENT	methanol, acetylenic alcohols, organic amines
HAZARD CLASS	Flammable Liquid, Corrosive
IDENTIFICATION NUMBER	UN2924
D.O.T. LABEL(S) REQUIRED	Flammable liquid and corrosive
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
methanol CAS: 67-56-1	65	ppm 200
propargyl alcohol		1
formamide		20
heavy aromatic naptha - 100 ppm; ethyl octynol - 1 ppm; isopropanol		400

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	192	SPECIFIC GRAVITY (H_2O=1) (@ 25°C)	0.800
VAPOR PRESSURE (mm Hg.) (MeOH @ 21.2°C)	100	PERCENT, VOLATILE BY VOLUME (%)	80
VAPOR DENSITY (AIR=1)	1.20	EVAPORATION RATE (n-butylac =1)	2.07
SOLUBILITY IN WATER	dispersible		
APPEARANCE AND ODOR	dark brown liquid, pine odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
52°F PMCC, ASTM D93-73			

EXTINGUISHING MEDIA: CO_2, alcohol foam, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool fire-exposed surfaces and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Respiratory protection required. Full body protection needed if fumes, mist or liquid may be contacted.

(Continued on reverse side)

TRADE NAME: W.I.N. 499618 INHIBITOR, acid, I-10D

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE ethyl octynol - 1 ppm - propargyl alcohol, formamide, methanol, naphtha, isopropanol (1,20,200,100,400 ppm)

EFFECTS OF OVEREXPOSURE
anesthesia,nausea,headache,dizziness,blindness,convulsions,death - may be fatal if inhaled/absorbed via skin - severe irritant to skin -chronic:liver,lung,kidney -Eye Contact - permanent blindness-

EMERGENCY AND FIRST AID PROCEDURES
flush skin and eyes with water for 15 min and remove to fresh air - call a doctor; artificial respiration; if swallowed, induce vomiting if victim is conscious - 100-200 ml usually fatal; no known antidote - treat symptoms

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		conditions - open flames, sparks, heat
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
strong oxidizers, mineral acids, olefins, esters, alkylene oxides, cyanohydrides

HAZARDOUS DECOMPOSITION PRODUCTS Does not decompose unless burned, but vapors are very toxic.
Decomposes, when burned, into HCl acid and toxic smoke and fumes

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
eliminate ignition sources; keep public away - vapors can be fatal; avoid contact and evacuate occupants fromdownwind areas; prevent from entering sewers, water sources, low areas - advise authorities of contact with sewer, water, soil, vegetation

WASTE DISPOSAL METHOD DANGER!
contain liquid with sand/earth; recover by pumping or with suitable absorbent - consult expert on disposal

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Use NIOSH/MSHA approved self-contained or respirator with amine cartridges.

VENTILATION	LOCAL EXHAUST	SPECIAL
	greater than 60 fpm hood/face velocity	explosion proof
	MECHANICAL *(General)* equal to outdoors	OTHER N/A

PROTECTIVE GLOVES	EYE PROTECTION
rubber	splash goggles

OTHER PROTECTIVE EQUIPMENT
chemical-resistant suit and boots

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
close container when not in use - containers hazardous when empty - observe all precautions given in this sheet - wear protective equipment

OTHER PRECAUTIONS
keep away from heat, sparks, flames - contains acetylenic alcohols, no known antidote - permanent blindness

499641

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: August 8, 1990

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Blend	TRADE NAME AND SYNONYMS HS-2
CHEMICAL FAMILY Aldehyde	FORMULA Proprietary Blend W.I.N. 499641

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	None (RQ /)
NAME OF HAZARDOUS COMPONENT	None
HAZARD CLASS	None
IDENTIFICATION NUMBER	None
D.O.T. LABEL(S) REQUIRED	None
PRECAUTIONARY LABEL	None

CAS 75[illegible]-12-6

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
None		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	219	SPECIFIC GRAVITY (H_2O=1)	1.27
VAPOR PRESSURE (mm Hg.)	24	PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	Miscible		
APPEARANCE AND ODOR	Colorless liquid	Odor: None	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A		N/A	N/A

EXTINGUISHING MEDIA
Use water fog, CO_2 or dry chemical extinguishing media

SPECIAL FIRE FIGHTING PROCEDURES
Firefighters should be equipped with self-contained breathing apparatus and turnout gear

UNUSUAL FIRE AND EXPLOSION HAZARDS
Non-explosive

(Continued on reverse side)

Form OSHA-20

TRADE NAME: W.I.N. 499641 HS-2

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE
Contact with the liquid or its vapors causes irritation of the eyes, skin and respiratory tract. Ingestion of small amounts causes severe disturbances including nausea and vomiting.

EMERGENCY AND FIRST AID PROCEDURES
Eyes - immediately wash eyes with running water for 15 min, get immediate medical attention. Skin - wash affected areas with water while removing clothing. Launder contaminated clothing before reuse. Ingestion - if swallowed, do not induce vomiting. Dilute with water or milk. Inhalation - move to fresh air, aid in breathing if necessary, and get immediate medical attention.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID N/A
	STABLE	X	
INCOMPATABILITY *(Materials to avoid)* N/A			
HAZARDOUS DECOMPOSITION PRODUCTS N/A			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Spills should be contained, solidified and placed in suitable containers for disposal in a RCRA licensed facility. This material is RCRA hazardous due to its properties.

WASTE DISPOSAL METHOD
Incinerate in a RCRA licensed facility. Do not discharge into waterways or sewer systems without proper authority.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
If vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator.

VENTILATION	LOCAL EXHAUST Use local exhaust to control vapors.	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Use gloves, overalls, aprons and boots to prevent skin contact

EYE PROTECTION Chemical goggles, wear a full face shield if splashing hazard exists.

OTHER PROTECTIVE EQUIPMENT
Eyewash, fountains and safety showers should be easily accessible.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS

Attachment to and continuation of 499641

MATERIAL SAFETY DATA SHEET

DATE: August 8, 1990

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Blend	HS-2

CHEMICAL FAMILY	FORMULA
Aldehyde	Proprietary Blend W.I.N. 499641

SECTION IXA - - SPECIAL PRECAUTIONS

IN CASE OF SPILLS OR LEAKS: Material is a RCRA regulated product. Spills should be contained, absorbed and placed in suitable containers for disposal in a RCRA licensed facility.

IN CASE OF FIRE: Use water foam, CO_2 or dry chemical extinguishing media. Firefighters should be equipped with self-contained breathing apparatus and turnout gear.

EMPTY CONTAINERS: All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Do not reuse this container unless it is professionally cleaned and reconditioned.

DISPOSAL: Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations. Refer to our Material Safety Data Sheet for specific disposal instructions.

ATTENTION: This product is sold for use by industrial institutions.

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

DATE: August 8, 1990

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Blend	TRADE NAME AND SYNONYMS HS-2
CHEMICAL FAMILY Aldehyde	FORMULA Proprietary Blend W.I.N. 499641

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

WARNING: Contact with the liquid or its vapors causes irritation of the eyes, skin and respiratory tract. Ingestion may result in acute poisoning, characterized by severe abdominal disturbances, central nervous system depression and possible respiratory or renal failure. Prolonged inhalation of the vapors may result in irritation or unconsciousness. Chronic overexposure may lead to liver and kidney damage. This product contains trace amounts of a chemical known to the State of California to be a carcinogen. Use with local exhaust. Wear an approved organic vapor respirator when vapors are generated. Wear chemical goggles, protective gloves and clothing as necessary to prevent contact. Wear a full face shield if splashing may occur. Eyewash fountains and safety showers must be easily accessible.

FIRST AID:

FOR EYES: **In case of contact,** immediately wash with running water for 15 minutes. Get immediate medical attention.

FOR SKIN: **In case of contact,** wash affected areas with water while removing contaminated clothing. Get immediate medical attention. Launder contaminated clothing before reuse.

FOR INGESTION: **If swallowed,** DO NOT INDUCE VOMITING. Dilute with water or milk and get medical attention. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

FOR INHALATION: **If breathed in,** move to fresh air. Aid in breathing if necessary and get immediate medical attention.

HANDLING: Employees must wear

ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Donot cut, puncture or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

499655

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: August 17, 1990

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS I-22
CHEMICAL FAMILY Surfactant Blend	FORMULA Proprietary W.I.N. 499655

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid (n.o.s.) (RQ /)
NAME OF HAZARDOUS COMPONENT	Methanol
HAZARD CLASS	Flammable liquid
IDENTIFICATION NUMBER	UN 1993
D.O.T. LABEL(S) REQUIRED	Flammable
PRECAUTIONARY LABEL	Flammable

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
Methanol (67561)	15-25	200 ppm
Heavy Aromatic Naptha (64742945)	3-6	100 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	ND	SPECIFIC GRAVITY (H_2O=1)	0.94
VAPOR PRESSURE (mm Hg.)	ND	PERCENT, VOLATILE BY VOLUME (%)	25
VAPOR DENSITY (AIR=1)	ND	EVAPORATION RATE (_____ =1)	ND
SOLUBILITY IN WATER	Dispersible		
APPEARANCE AND ODOR	Dark liquid with methanol/alkyl amine odor		

7.83

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
62 F (PMCC)		6.7	36.0

EXTINGUISHING MEDIA
Foam, dry chemical, CO_2, water spray.

SPECIAL FIRE FIGHTING PROCEDURES
Water spray may be used to cool fire exposed metal containers to prevent re-ignition from hot surfaces. Do not breathe smoke or hot fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS
None known

(Continued on reverse side)

TRADE NAME: W.I.N. 499655, I-22

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE
Eyes - irritation, burning, itching and pain. Skin contact - irritation, redness.

Inhalation - may cause nausea, vomiting. Ingestion - nausea, vomiting, light headedness.

EMERGENCY AND FIRST AID PROCEDURES
Eyes - flush copiously with water immediately for 15-20 min. Get medical treatment.

Skin contact - wash with soap and water. Remove clothing and launder before reuse.

Inhalation - remove from exposure. Control delirium, avoid respiratory delirium.

Ingestion - drink water to dilute. Induce vomiting. Get emergency medical treatment for ingestion of methanol.

SECTION VI - REACTIVITY DATA

STABILITY	**UNSTABLE**		**CONDITIONS TO AVOID** Open flames
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Strong oxidizers, mineral acids.

HAZARDOUS DECOMPOSITION PRODUCTS
Oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION	**MAY OCCUR**		**CONDITIONS TO AVOID** N/A
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Stop the flow of liquid, eliminate sources of ignition. Dike or prevent spreading of liquid. Vacuum up. Absorb or scrape up contaminated soil and place into container for later disposal.

WASTE DISPOSAL METHOD
Dispose waste by incineration under controlled conditions or put in chemical landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
In closed areas, use NIOSH approved organic vapor respirator.

VENTILATION	**LOCAL EXHAUST** Recommended	**SPECIAL**
	MECHANICAL *(General)* With explosion proof circuits	**OTHER**

PROTECTIVE GLOVES Neoprene	**EYE PROTECTION** Safety goggles

OTHER PROTECTIVE EQUIPMENT
Eye wash stations, ample water supply, showers, protective clothing.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Store in cool, dry area. Ground containers and lines during transfer to eliminate static electricity.

OTHER PRECAUTIONS
Do not ingest.

499655

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

DATE:

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
	I-22

CHEMICAL FAMILY	FORMULA
Surfactant Blend	Proprietary W.I.N.499655

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

FIRST AID:
FOR EYES: **In case of contact,** flush copiously with water immediately for 15 to 20 minutes. Get medical treatment.
FOR SKIN: **In case of contact,** wash with soap and water. Remove contaminated clothing and wash skin with soap and water. Launder clothing before re-use.
FOR INGESTION: **If swallowed,** drink water to dilute. Induce vomiting. Get emergency medical treatment for ingestion of methanol.
FOR INHALATION: **If breathed in,** remove from exposure. Control delirium, avoid respiratory depression.
HANDLING: **Employees must wear**

ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precuations listed for this product. Donot cut, puncture or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: January 18, 1990

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code): P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS: PROPRIETARY	TRADE NAME AND SYNONYMS: Hi-Seal 2
CHEMICAL FAMILY: PROPRIETARY	FORMULA: W.I.N499634

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	NONE (RQ /)
NAME OF HAZARDOUS COMPONENT	NONE
HAZARD CLASS	NONE
IDENTIFICATION NUMBER	NONE
D.O.T. LABEL(S) REQUIRED	NONE
PRECAUTIONARY LABEL	NONE

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
NONE KNOWN		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	1.30
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	Insoluble		
APPEARANCE AND ODOR	black powder or chunks		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	200 F(Tag closed cup)	FLAMMABLE LIMITS	STP in air
Lel		Uel	
EXTINGUISHING MEDIA	Water fog, foam, dry chemical		
SPECIAL FIRE FIGHTING PROCEDURES	Wear self-contained breathing apparatus in closed or poorly ventilated areas		
UNUSUAL FIRE AND EXPLOSION HAZARDS			

(Continued on reverse side)

TRADE NAME: W.I.N.499634,

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE
Prolonged or repeated inhalation of dust concentrations in excess of TLV may result in lung injury.

EMERGENCY AND FIRST AID PROCEDURES
Eyes - Irrigation of the eye immediately with water for 5 minutes
Skin - Contact will probably cause no more than irritation
Inhalation - Remove to fresh air if occur. Consult medical personnel

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS
Oxides of nitrogen, carbon monoxide, carbon dioxide expected on burning

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Scoop and sweep up an return to container or place in container for disposal

WASTE DISPOSAL METHOD
Diapose in accordance with federal, state, and local regulations. Incineration is preferred

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Prolonged or repeated exposure will require NOISH approved dust respirator

VENTILATION	LOCAL EXHAUST	SPECIAL
	sufficient to control dust	NONE
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
recommended	safety glasses

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid breathing high dust concentrations. Avoid accumulation of dust.
Store away from sources of ignition.

OTHER PRECAUTIONS

100295

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: August 15, 1984

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Cellophane flakes, Polyester flakes	Cello-Seal
CHEMICAL FAMILY	**FORMULA**
Cellulose, Polyester	Lost Circulation Agent, WZ-100295

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	none
HAZARD CLASS	none
IDENTIFICATION NUMBER	none
D.O.T. LABEL(S) REQUIRED	none
PRECAUTIONARY LABEL	none

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	<1
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	0
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	0
SOLUBILITY IN WATER	0		
APPEARANCE AND ODOR	Transparent; no odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
350 - 400°F			

EXTINGUISHING MEDIA
Water, CO_2 Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS None

(Continued on reverse side)

TRADE NAME: Lost Circulation Agent, Cello-Seal, W.I.N. 100295

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: N/A

EFFECTS OF OVEREXPOSURE: None

EMERGENCY AND FIRST AID PROCEDURES: None

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*: None

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Mechanical cleanup for reuse or disposal.

WASTE DISPOSAL METHOD: Land fill

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*: None

VENTILATION	LOCAL EXHAUST: None	SPECIAL
	MECHANICAL *(General)*: None	OTHER

PROTECTIVE GLOVES: None

EYE PROTECTION: None

OTHER PROTECTIVE EQUIPMENT: No special equipment required

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

No special precautions required.

OTHER PRECAUTIONS

Form Approved
Budget Bureau No. 44-R1387
Approval Expires April 30, 1972

Form No. OSHA-20
June 1971

U.S. DEPARTMENT OF LABOR

Occupational Safety & Health Adm.

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME: AMERICAN GILSONITE COMPANY	EMERGENCY TELEPHONE NO.: 801 328-0311
ADDRESS (Number, Street, City, State, and ZIP Code): 1150 Kennecott Building, Salt Lake City, Utah	
CHEMICAL NAME AND SYNONYMS: Asphaltite	TRADE NAME AND SYNONYMS: American Gilsonite
CHEMICAL FAMILY: --	FORMULA: --

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

NONE (PAINTS, PRESERVATIVES, & SOLVENTS)

NONE (ALLOYS AND METALLIC COATINGS)

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

NONE

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	--	SPECIFIC GRAVITY (H_2O=1)	1.05
VAPOR PRESSURE (mm Hg.)	--	PERCENT VOLATILE BY VOLUME (%)	--
VAPOR DENSITY (AIR=1)	--	EVAPORATION RATE (_____=1)	--
SOLUBILITY IN WATER	0		

APPEARANCE AND ODOR: Dark Brown - Asphaltic

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): 600+ °F - COC	FLAMMABLE LIMITS: --	LEL	UEL	
EXTINGUISHING MEDIA: Water				
SPECIAL FIRE FIGHTING PROCEDURES: None				
UNUSUAL FIRE AND EXPLOSION HAZARDS: Dust concentrations of minus 250 mesh material exceeding 20 oz. per 1,000 cu. ft. could result in a potential explosive atmosphere.				

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Non-Toxic
EFFECTS OF OVEREXPOSURE	
EMERGENCY AND FIRST AID PROCEDURES	

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATABILITY (Materials to avoid)	None		
HAZARDOUS DECOMPOSITION PRODUCTS	None		
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

No special hazard - use good housekeeping procedures.

WASTE DISPOSAL METHOD Return material to container

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)	None		
VENTILATION	LOCAL EXHAUST	As necessary for non-hazardous dust control	SPECIAL
	MECHANICAL (General)		OTHER
PROTECTIVE GLOVES	None	EYE PROTECTION	None
OTHER PROTECTIVE EQUIPMENT	Avoid sources of ignition in dust concentration areas.		

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	None
OTHER PRECAUTIONS	

100323

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

February 25, 1980

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
Monsanto Company	(314) 694-1000

ADDRESS (Number, Street, City, State, and ZIP Code)
800 North Lindbergh Blvd., St. Louis, Missouri 63166

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Sodium Acid Pyrophosphate	SAPP
CHEMICAL FAMILY: Sodium Phosphates	FORMULA: $Na_2H_2P_2O_7$

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Not a hazardous material as defined in 29 CFR Section 1501.2 which per-		
tains to this data sheet.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	N/A
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	Appreciable		
APPEARANCE AND ODOR	A fine white powder - Odorless		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A	N/A		

EXTINGUISHING MEDIA
N/A

SPECIAL FIRE FIGHTING PROCEDURES
N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS
N/A

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
None established

EFFECTS OF OVEREXPOSURE
N/A

EMERGENCY AND FIRST AID PROCEDURES
N/A

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Normal good housekeeping procedures.

WASTE DISPOSAL METHOD

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	LOCAL EXHAUST If dust is a problem.	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION Good practice

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Normal good housekeeping practices.

OTHER PRECAUTIONS

WCNA-1063 8/85
R-6 (05/86)

INTER-OFFICE CORRESPONDENCE

To Dwayne Nelson At FW - Accident Prevention

From Robert W. Anderson RWA At FW - Laboratory Services

Date 7MAR89

RE: Safety Information Update

This is to inform you of revisions, additions, deletions or replacement of products or chemicals and the relevant safety data.

Western Trade Name: sodium acid pyrophosphate (SAPP) W.I.N.: 100323
Chemical Name (if not trade named): same
Addition __ Revision X Replacement __ Deletion __ to product line
Western Product X Western System __
Cementing X Stimulation X
DOT Proper Shipping Name & I.D. Number (SPM-04-02): not regulated
DOT Hazardous Material Class: N/A
Label: N/A
Chemical Storage Class (SPM-04-01): I.1.
Chemical First Aid Guide Class (SPM-04-04):
Eyes * Lungs -- Skin -- Mouth --
EPA Hazardous Waste Classification: not regulated
Reportable Quantity: RQ N/A / _____
Material Safety Data Sheet: Attached XXX Not Available ____
On File at Research XXX

cc: Legal Services
Product Specification File (original)

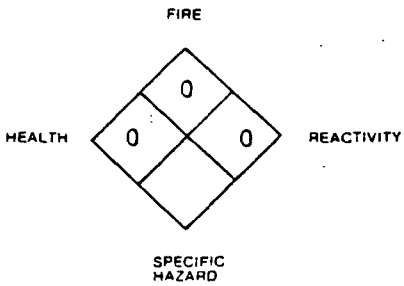
Attachments: MSDS
Label
Precautionary Statement

Note: If deletion, attach copy of page(s) to be deleted, write delete across the page(s) attached.

"A man's judgment is no better than his information"

Material safety data

NFPA Designation 704



HAZARD RATING.
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT

Sodium Acid Pyrophosphate

Emergency telephone **(913) 843-3880 Lawrence, KS**
(201) 541-4171 Carteret, NJ

Product Information		
Synonyms	Disodium dihydrogen pyrophosphate, acid sodium pyrophosphate, SAPP	
Shipping name	**DOT** Not regulated	
	IATA Not regulated	
	IMCO Not regulated	
Formula $Na_2H_2P_2O_7$	**Chemical Family** Phosphate	

Ingredients			
Material or component	**%**	**CAS #**	**Hazard Class**
Sodium acid pyrophosphate	100	7758-16-9	None

Physical data				
Melting point	628° C	**Specific Gravity (H_2O = 1)**	Bulk density 1.04 g/ml
Boiling point	Over 1000° C	**Solubility in H_2O, % by WT**	@ 25° C, 15-18
Vapor pressure	Nonvolatile	**% Volatiles by Volume**	Nonvolatile
Vapor Density (Air - 1)	Nonvolatile	**Evaporation rate (butyl acetate = 1)**	Nonvolatile
Room temperature: appearance & state	White powder or granules	**pH (as is)**	NA
Odor	None	**pH (1% solution)**	4.2-4.5

Fire, explosion and reactivity data			
Flash point Nonflamrnable		**Flammable Limits (air)**	**Upper** NA
Autoignition temp. Noncombustible			**Lower** NA
Extinguishing media ☐ **Water** ☐ **Water Fog** ☐ **CO_2** ☐ **Dry Chemical** ☐ **Other** NA			
Special fire fighting procedures NA			
Degree of fire and explosion hazard None			
☒ **Stable** ☐ **Unstable**		**Hazardous Polymerization** ☐ **May Occur**	☒ **Will Not Occur**
Conditions to Avoid None			
Major contaminates that may contribute to instability None			
Incompatibility None			
Hazardous decomposition products None			

*NA—Not Applicable

Health hazard information

Sodium acid pyrophosphate is generally considered innocuous. It may cause eye irritation and it may—for extremely sensitive individuals—cause skin rash after extended exposure.

Routes of exposure

Route	Hazard classification NIOSH 1974 Pb-246698	Source	Date
Inhalation	No data		
Skin contact	No data		
Skin absorption	No data		
Eye contact	No data		
Ingestion	Slightly hazardous	NIOSH RTECS 79-100	1979

Effects of Overexposure

Acute exposure	No data
Chronic exposure	No data

Emergency and first aid procedures

Eyes	Flush eyes with large amounts of water. If irritation persists, obtain medical attention.
Skin	Wash off with water.
Inhalation	Remove from exposure.
Ingestion	Rinse mouth and dilute stomach contents with water, or preferably with milk if available.
Decontamination procedures	Wash with water.
Notes to physician	Large doses may cause nausea, vomiting and diarrhea. Systemic oral toxicity is extremely rare and has consisted of acidosis and hypocalcemic tetany.

Special protection information

Ventilation requirements	No special requirement
Recommended personal protective equipment:	No special requirement
Respiratory (Specify conditions)	Dusty conditions may require the use of NIOSH/MSHA certified particulate respiratory protection.
Eyes	No special requirement
Gloves	No special requirement
Special clothing and equipment	No special requirement

Precautionary statement

Individual susceptibility may require the use of protective clothing, general purpose gloves, goggles and respiratory protection.

Storage and handling

Store in dry area for product quality assurance.

Disposal, spill or leak procedures

Aquatic toxicity classification **Source** **Date**
NIOSH RTECS No. 79-100

No data

Procedure for release or spill

Material should be swept up for salvage or disposal.

Waste disposal method

If material can not be salvaged. it should be disposed of in a landfill in accordance with all local. state and federal regulations.

Neutralizing chemicals None

Transporation data	
	Chemtrec Emergency Telephone: (800) 424-9300
	Proper shipping name Sodium acid pyrophosphate
	DOT classification Not restricted
	DOT labels Not required
	DOT marking Not required
	DOT placard Not required
	UN number
	Hazardous substance/RQ
	49 STCC number
	Emergency accident precautions and procedures
	Precautions to be taken in transportation
	CMA chemcard number
	Type packages Multiwall paper bags.

Additional regulatory concerns	
	Material is reported in EPA TSCA inventory list ✕ **Yes** ☐ **No**
	FDA GRAS list. permitted in food. USDA Permitted in meat.

FMC Corporation furnishes the data contained herein in good faith at customer's request without liability or legal responsibility for same whatsoever and no warranty or guarantee: express or implied. is made with respect to such data: nor does FMC grant permission. recommendation. or inducement to infringe any patent whether owned by FMC or others. The data is offered solely for your information and consideration. Since conditions of use are beyond FMC's control. user assumes all responsibility and risk.

FMC Corporation Industrial Chemical Group 2000 Market Street Philadelphia. Pennsylvania 19103

(215) 299-6000

Date of issue	Supersedes
January 1982	

100222

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 26 SEP 84

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Proprietary Blend	TRADE NAME AND SYNONYMS PARAFFIN CONTROL, Parasol D
CHEMICAL FAMILY Surfactant	FORMULA W.I.N. 100222

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Combustible liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	Aromatic naphtha
HAZARD CLASS	Combustible material
IDENTIFICATION NUMBER	NA1993
D.O.T. LABEL(S) REQUIRED	Combustible
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
High flash aromatic naphtha	85	N/A
Isopropanol	6	400ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	>284°	SPECIFIC GRAVITY (H_2O=1) @ 25°c	0.892
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	dispersible		
APPEARANCE AND ODOR	Clear, amber liquid with an aromatic odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
145°F PMCC		1%	

EXTINGUISHING MEDIA
Dry chemical, carbon dioxide and alcohol foam

SPECIAL FIRE FIGHTING PROCEDURES
Wear self-contained breathing apparatus

UNUSUAL FIRE AND EXPLOSION HAZARDS
Vapors are heavier than air and may travel along ground to a source of ignition.

(Continued on reverse side)

TRADE NAME: W.I.N. 100222, PARAFIN CONTROL, Parasol D

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
400 ppm Isopropanol

EFFECTS OF OVEREXPOSURE
Liquid is corrosive to eyes and skin. Inhalation is nauseous and can cause asphyxiation.

EMERGENCY AND FIRST AID PROCEDURES
Flush eyes and skin with water for at least 15 minutes and get medical attention. For inhalation, remove to fresh air. If breathing is difficult or stopped, give oxygen or apply artifical respiration. If swallowed, do not induce vomiting and get immediate medical attention.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS
Various hydrocarbons, CO_2 and CO

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate all sources of ignition. Stop spill at source and dike area. Pump excess to salvage truck. Absorb remainder on sand or other material and dispose.

WASTE DISPOSAL METHOD
Liquid incineration or in a posted toxic substance landfill in accordance with local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Organic vapor respirator

VENTILATION	LOCAL EXHAUST Sufficient to maintain exposure	SPECIAL
	MECHANICAL *(General)* Level below TLV	OTHER

PROTECTIVE GLOVES Rubber	EYE PROTECTION Face shield or goggles

OTHER PROTECTIVE EQUIPMENT
Impervious clothing and boots.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Handle emptied containers the same as full drums, because vapors will remain in the drum.

OTHER PRECAUTIONS
Keep away from all sources of ignition. Avoid contact, inhalation or ingestion of material.

WESTERN
Processors

Western Petroleum Services

W.I.N. 100222

PARASOL D

PARAFFIN CONTROL SURFACTANT

Net Content: 402 lb(182 kg)
54 gal(204 L) @ 77°F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 698.0WG

SPECIFIC USAGE: Use at the rate of 5 to 10 gal/1000 gal of treatment fluid.

When Handling This Product Employees MUST WEAR: Rubber gloves, face shield or goggles, impervious clothing and boots. Wear organic vapor respirator.

FOR INDUSTRIAL USE ONLY

CAUTION!

Liquid is corrosive to eyes and skin. Inhalation is nauseous and can cause asphyxiation.
First Aid: Flush eyes and skin with water at least 15 minutes and get medical attention. For inhalation, remove to fresh air. If breathing is difficult or stopped, give oxygen or apply artificial respiration. If swallowed, DO NOT induce vomiting and get medical attention immediately.
Leak or Spills: Eliminate sources of ignition. Stop spill at once and dike area. Pump excess into salvage truck, absorb remainder with sand or other absorbant material and dispose. Use liquid incineration or in posted toxic substance landfill.
Fire Fighting: Dry chemical, carbon dioxide and alcohol foam. Vapors are heavier than air and may travel along ground to source of ignition.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 · FORT WORTH, TEXAS 76101

(182 kg) 402 lbs
(204 liters) 54 gal

Batch no.

*****D.O.T. PROPER SHIPPING NAME: Combustible liquid, n.o.s., contains aromatic naphtha , NA1993*****

100463

063 (9/82) R-6 (03/84) **INTER-OFFICE CORRESPONDENCE**

To Bob Slaughter At FW - Accident Prevention

From Robert W. Anderson RWA At FW - Research & Development Center

Date 1JUL84

RE: Safety Information Update

This is to inform you of revisions, additions, deletions or replacement of products or chemicals and the relevant safety data.

Western Trade Name: Paratrol L

Chemical Name (if not trade named): Resin solution W.I.N.: 100463

Addition __ Revision __ Replacement X Deletion __ to product line

Western Product X Western System _____

Cementing __ Stimulation X Used for Warehouse Blending Only __

DOT Proper Shipping Name & I.D. Number (SPM-04-02): Combustible liquid, n.o.s. NA1993

DOT Hazardous Material Class: Combustible material

Label: Combustible

Chemical Storage Class (SPM-04-01): II.1

Chemical First Aid Guide Class (SPM-04-04):

Eyes * Lungs B Skin G Mouth T

EPA Hazardous Waste Classification: Ignitable waste, D001

Material Safety Data Sheet: Attached X Not Available ____

On File at Research X

Replace all information on WZ-100463 with the attached.

cc: Product Specification File (original)
Legal Services

Attachments: MSDS
Label
Precautionary Statement

100463

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: July 1,1984

SECTION I

Supplier's Name: The Western Company of North America	EMERGENCY TELEPHONE NO.: (817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code): P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS: Proprietary blend	TRADE NAME AND SYNONYMS: Paraffin Control, Paratrol L
CHEMICAL FAMILY: resin solution	FORMULA: W.I.N. 100463

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Combustible liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	Contains light aromatic naphtha
HAZARD CLASS	Combustible material
IDENTIFICATION NUMBER	NA 1993
D.O.T. LABEL(S) REQUIRED	Combustible material
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
light aromatic naphtha		25 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1) @ 60°F	0.90
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	65
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	114°F SFCC	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA	CO_2 or dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES				
UNUSUAL FIRE AND EXPLOSION HAZARDS				

(Continued on reverse side)

TRADE NAME: W.I.N. 100463, Paraffin Control, Paratrol L

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	not established
EFFECTS OF OVEREXPOSURE	See Attachment
EMERGENCY AND FIRST AID PROCEDURES	See Attachment

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Dike to prevent entering any waterway. Cover with sand, dirt of suitable chemical adsorbent.

WASTE DISPOSAL METHOD

After material is adsorbed pick up sand, dirt or chemical adsorbent and take to an approved hazardous waste disposal site. Dispose of residue in accordance with applicable waste management regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* When exposure exceeds TLV, the use of a chemical respirator with organic cartridge is recommended.

VENTILATION	LOCAL EXHAUST Recommended	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES synthetic	EYE PROTECTION chemical goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid contact with skin and eyes. Avoid breathing vapor or spray mist. Keep container tightly closed when not in use.

OTHER PRECAUTIONS

100463

Attachment to MSDS
TRADE NAME: W.I.N. 100463, Paraffin Control, Paratrol L

Effects of overexposure

Inhalation: Vapor is a respiratory and mucous membrane irritant and may cause severe systemic injury. High concentrations cause nausea, headaches, dizziness, vertigo, narcosis and possible CNS depression. In extreme cases unconsciousness and pulmonary edema may result. Prolonged or repeated exposure of high vapor concentrations may cause kidney and liver damage.

Skin and eye contact: A primary skin irritant. On repeated or prolonged skin contact, may cause dermatitis owing to dehydrating and defatting properties. May be readily absorbed through the skin. Contact with eyes causes severe irritation and may lead to persistent corneal opacity.

Ingestion: May cause severe gastrointestinal distress. Aspiration into lungs may cause pulmonary edema and chemical pneumonitis.

Emergency and First Aid Procedures

For Skin: Wash skin with soap and water. If rash or irritation develops, seek first aid.

For Eyes: Flush eyes with plenty of water for 15 minutes. Consult a physician.

For Inhalation: Remove to fresh air. Administer oxygen if necessary. Get medical attention if symptoms persist or exposure was severe.

For Ingestion: Do not induce vomiting. Get medical attention immediately. Administer activated carbon and perform gastric lavage if indicated.

WESTERN
Pacesetters

Western Petroleum Services

W.I.N. 100463

PARATROL L

Paraffin Inhibitor

batch#012345

Flash Point: 114° F(46° C) SFCC

Net Contents: 414 lb(187.8 kg)

55 gal(208.2liter)@60° F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s)

SPECIFIC USAGE: Use at the rate of 5-10 gal per 1000 gallon of water frac.

FOR INDUSTRIAL USE ONLY

CAUTION!

AVOID contact with eyes, skin and clothing.
WASH thoroughly after handling.
KEEP container closed.
AVOID breathing vapor. Use with adequate ventilation at elevated temperatures, this product may burn.

Fire Fighting:	Use foam, dry chemical or CO_2.
FIRST AID:	
For eyes:	In case of contact, wash eyes with plenty of water for at least 15 minutes. Call physician.
For skin:	In case of contact, flush skin with water. Wash clothing before reuse.
For ingestion:	If swallowed, do not induce vomiting. Get immediate medical attention. Administer activated carbon and perform gastric lavage, if indicated.
Handling:	Employees must wear synthetic gloves and chemical goggles.
ATTENTION:	After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Do not cut, puncture or weld on or near this container.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

batch no.

.I.N. 100002, 3, 4, 5&9, PROP, SAND, Class E, 12/20, 16/30, 20/40, 30/50 & 40/70 (white)

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085 DIAL COMM 8*235-4085

MATERIALS INFORMATION SERVICES

NO. 71 100004

QUARTZ

Date September 1980

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: QUARTZ

OTHER DESIGNATIONS: Silica, Crystalline; Flint; Agate; Sand; Silicic Anhydride; Silica Flour; Silicon Dioxide; SiO_2; GE Materials D4C15, D4C19, D4C38, D4C39, D4C45-47, and D4C50; CAS #014 808 607

MANUFACTURER: Available from many sources.

SECTION II. INGREDIENTS AND HAZARDS	%	HAZARD DATA
Silicon Dioxide, Crystalline (Quartz form) *Current OSHA Standard. ACGIH (1980) 8-hr TWA is 3 mppcf** or 0.1 mg/m^3 for respirable dust. (Values for total dust, mg/m^3, are three times higher for both OSHA and ACGIH.) NIOSH (1974) has proposed a 10-hr TWA of 0.05 mg/m^3, permissible exposure level. **Millions of particles per cubic foot of air.	>98	8-hr TWA (Resp. Dust)* $\frac{250 \text{ mppcf}^{**}}{\%SiO_2+5}$ or $\frac{10 \text{ mg/m}^3}{\%SiO_2+2}$ Human, inhalation TCLo 16 mppcf/8-hr intermittent for 17.9 yr Pulmonary Effects Rat, TDLo 90 mg/kg Intraperitoneal - Neoplastic Effects Intrapleural- Carcinogenic Effects

SECTION III. PHYSICAL DATA

Boiling point at 1 atm, deg C	2230	Specific gravity (H_2O=1)	2.65
Vapor pressure at 1732 C, mm Hg	10	Melting point, deg C	1610
Water solubility	Insoluble	Formula weight (SiC_2)	60.09

Appearance: When pure, material is white powder or colorless crystals. Impurities can produce various colorations.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER

This material is noncombustible. Use extinguishing media appropriate to the surrounding fire.

SECTION V. REACTIVITY DATA

Material is highly stable under ordinary conditions (sand-like).

When exposed to high temperatures, quartz (or amorphous silica) can change crystal structure to form tridymite (above 870 C) or cristobalite (above 1470 C) which have greater health hazards than quartz.

It is attacked by strong alkalis. It will combine chemically with many metallic oxides upon heating at high temperature. It reacts with hydrofluoric acid to generate volatile SiF_4. It is incompatible with oxygen difluoride, chlorine trifluoride, manganese trifluoride, and certain other powerful oxidizers and fluorine-containing compounds.

I.I.N. 100002, 3, 4, 5&9, PROP, SAND Class E, 12/20, 16/30, 20/40, 30/50 & 40/70 (white)

NO. 71

SECTION VI. HEALTH HAZARD INFORMATION

TLV (See Sect. II)

Health hazards can occur from excessive inhalation of silica dust, otherwise nontoxic. Crystalline silica in the lung can produce a pneumoconiosis, commonly called silicosis, which is a chronic, slowly developing disease. Symptoms are usually delayed (10 years or more) but may appear in as little as 8-18 months after initial exposure. Symptoms are dyspnea - caused by the many lung scars that develop from the silica dust - pain in the chest, decreased vital capacity, and cough.

Chronic lung scarring leads to a progressive massive fibrosis that is often accompanied by increased susceptibility to pulmonary tuberculosis and other respiratory infections. In a diseased lung, dust particles under 3 microns greatly outnumber larger ones, and many particles are less than 1 micron. Symptoms of silicosis become progressive with continued exposure and advancing age. Smoking can increase the risk of injury.

FIRST AID:

Eye Contact: Flush eyes thoroughly with running water, including under the eyelids. for at least 15 minutes.

Skin Contact: Wash affected area with soap and water.

Inhalation: Remove to fresh air. Give oxygen with intermittent positive-pressure and/or artificial respiration as needed. Seek medical attention for treatment, observation, and support as needed.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of major spills. Provide ventilation. Clean-up personnel need protection against eye contact and inhalation of dust. Pick up spills taking care to avoid raising dust clouds (use vacuum or wet sweeping). Place in closed container for disposal.

DISPOSAL: Use waste containers suitable for transportation and dispose in approved landfill. Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide adequate general and local exhaust ventilation to meet TLV requirements. Provide workers with dust respirators for use in emergency or nonroutine situations where dust levels may exceed TLV. Efficient dust respirators can be used up to 10X TLV. For exposure up to 100X TLV use full facepiece respirator with replaceable dust filter. Higher exposures need an approved, air supplied respirator.

Workers should wear safety goggles and work gloves for eye and skin protection. (Sand blasters require special protective equipment and safety precautions.)

Eyewash fountains should be available to areas of use and handling.

Provide preplacement and annual physical exams for exposed workers with emphasis on respiratory and cardiovascular systems. Preclude from exposure those individuals with pulmonary disease.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store powdered silica in closed containers in a dry, well-ventilated area.

Keep dust in work area at a minimum and maintain air concentration of silica as far below TLV as feasible. Use good housekeeping techniques, such as, vacuuming and wet sweeping to remove collected dust and prevent formation of dust clouds.

Avoid inhalation of dust. Avoid contact of materials with eyes.

NIOSH (1976) warns of increased risk of impaired health due to a combination of smoking and silica dust exposure.

DATA SOURCE(S) CODE:2-12,19,24-27,31.34.37,38

Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore although reasonable care has been taken in the preparation of such information General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use

APPROVALS: MIS CRD J. M. Nielsen

Industrial Hygiene and Safety 10-9-80

MEDICAL REVIEW: 10/22/80

GENERAL ELECTRIC

100008

.N. 100006, 8, 10, 86, 302 & 319, PROP, Sand, Class D 8/16, 12/20, 16/30 & 20/40 (brown)

MATERIAL SAFETY DATA SHEET

CORPORATE RESEARCH & DEVELOPMENT

SCHENECTADY, N. Y. 12305

Phone: (518) 385-4085 DIAL COMM 8*235-4085

MATERIALS INFORMATION SERVICES

No. 71

QUARTZ

Date September 1980

SECTION I. MATERIAL IDENTIFICATION

MATERIAL NAME: QUARTZ

OTHER DESIGNATIONS: Silica, Crystalline; Flint; Agate; Sand; Silicic Anhydride; Silica Flour; Silicon Dioxide; SiO_2; GE Materials D4C15, D4C19, D4C38, D4C39, D4C45-47, and D4C50; CAS #014 808 607

MANUFACTURER: Available from many sources.

SECTION II. INGREDIENTS AND HAZARDS	%	HAZARD DATA
Silicon Dioxide, Crystalline (Quartz form) *Current OSHA Standard. ACGIH (1980) 8-hr TWA is 3 mppcf** or 0.1 mg/m^3 for respirable dust. (Values for total dust, mg/m^3, are three times higher for both OSHA and ACGIH.) NIOSH (1974) has proposed a 10-hr TWA of 0.05 mg/m^3, permissible exposure level. **Millions of particles per cubic foot of air.	>98	8-hr TWA (Resp. Dust)* $\frac{250 \text{ mppcf}^{**}}{\%SiO_2+5}$ or $\frac{10 \text{ mg/m}^3}{\%SiO_2+2}$ Human, inhalation TCLo 16 mppcf/8-hr intermittent for 17.9 yr Pulmonary Effects Rat, TDLo 90 mg/kg Intraperitoneal - Neoplastic Effects Intrapleural- Carcinogenic Effects

SECTION III. PHYSICAL DATA

Boiling point at 1 atm, deg C	2230	Specific gravity (H_2O=1)	2.65
Vapor pressure at 1732 C, mm Hg	10	Melting point, deg C	1610
Water solubility	Insoluble	Formula weight (SiO_2)	60.09

Appearance: When pure, material is white powder or colorless crystals. Impurities can produce various colorations.

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER

This material is noncombustible. Use extinguishing media appropriate to the surrounding fire.

SECTION V. REACTIVITY DATA

Material is highly stable under ordinary conditions (sand-like).

When exposed to high temperatures, quartz (or amorphous silica) can change crystal structure to form tridymite (above 870 C) or cristobalite (above 1470 C) which have greater health hazards than quartz.

It is attacked by strong alkalis. It will combine chemically with many metallic oxides upon heating at high temperature. It reacts with hydrofluoric acid to generate volatile SiF_4. It is incompatible with oxygen difluoride, chlorine trifluoride, manganese trifluoride, and certain other powerful oxidizers and fluorine-containing compounds.

W.I.N. 100006, 8, 10, 86, 302 & 319, PROP, Sand, Class D 8/16, 12/20, 16/30 & 20/40 (brown)

NO. 71

SECTION VI. HEALTH HAZARD INFORMATION

TLV (See Sect. II)

Health hazards can occur from excessive inhalation of silica dust, otherwise nontoxic. Crystalline silica in the lung can produce a pneumoconiosis, commonly called silicosis, which is a chronic, slowly developing disease. Symptoms are usually delayed (10 years or more) but may appear in as little as 8-18 months after initial exposure. Symptoms are dyspnea - caused by the many lung scars that develop from the silica dust - pain in the chest, decreased vital capacity, and cough.

Chronic lung scarring leads to a progressive massive fibrosis that is often accompanied by increased susceptibility to pulmonary tuberculosis and other respiratory infections. In a diseased lung, dust particles under 3 microns greatly outnumber larger ones, and many particles are less than 1 micron. Symptoms of silicosis become progressive with continued exposure and advancing age. Smoking can increase the risk of injury.

FIRST AID:

Eye Contact: Flush eyes thoroughly with running water, including under the eyelids. for at least 15 minutes.

Skin Contact: Wash affected area with soap and water.

Inhalation: Remove to fresh air. Give oxygen with intermittent positive-pressure and/or artificial respiration as needed. Seek medical attention for treatment, observation, and support as needed.

SECTION VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

Notify safety personnel of major spills. Provide ventilation. Clean-up personnel need protection against eye contact and inhalation of dust. Pick up spills taking care to avoid raising dust clouds (use vacuum or wet sweeping). Place in closed container for disposal.

DISPOSAL: Use waste containers suitable for transportation and dispose in approved landfill. Follow Federal, State, and Local regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Provide adequate general and local exhaust ventilation to meet TLV requirements. Provide workers with dust respirators for use in emergency or nonroutine situations where dust levels may exceed TLV. Efficient dust respirators can be used up to 10X TLV. For exposure up to 100X TLV use full facepiece respirator with replaceable dust filter. Higher exposures need an approved, air supplied respirator.

Workers should wear safety goggles and work gloves for eye and skin protection. (Sand blasters require special protective equipment and safety precautions.)

Eyewash fountains should be available to areas of use and handling.

Provide preplacement and annual physical exams for exposed workers with emphasis on respiratory and cardiovascular systems. Preclude from exposure those individuals with pulmonary disease.

SECTION IX. SPECIAL PRECAUTIONS AND COMMENTS

Store powdered silica in closed containers in a dry, well-ventilated area.

Keep dust in work area at a minimum and maintain air concentration of silica as far below TLV as feasible. Use good housekeeping techniques, such as, vacuuming and wet sweeping to remove collected dust and prevent formation of dust clouds.

Avoid inhalation of dust. Avoid contact of materials with eyes.

NIOSH (1976) warns of increased risk of impaired health due to a combination of smoking and silica dust exposure.

DATA SOURCE(S) CODE:2-12,19,24-27,31,34,37,38

Judgments as to the suitability of information herein for purchaser's purposes are necessarily purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, General Electric Company extends no warranties, makes no representations and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser's intended purposes or for consequences of its use.

APPROVALS: MIS CRD J. M. Nielsen

Industrial Hygiene and Safety 10-9-80

MEDICAL REVIEW: 10/22/80

GENERAL ELECTRIC

100287

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: Revised Jan. 85

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Proprietory blend	Retarder, Cement, WR-15
CHEMICAL FAMILY	FORMULA
Lignosulfonate, salt of organic acid, silica	WIN-100287

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
No toxic label required as industrial formulation		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	2.3
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	1%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	N/A		
APPEARANCE AND ODOR	Tan powder - slightly unpleasant odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A			

EXTINGUISHING MEDIA
Water

SPECIAL FIRE FIGHTING PROCEDURES
Fireman should wear self-contained breathing apparatus

UNUSUAL FIRE AND EXPLOSION HAZARDS
Air borne powder may provide conditions for a dust explosion.

(Continued on reverse side)

TRADE NAME: WR-15

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
As specified in OSHA standard currently #1910.1000 Table 2-3 for silica crystalline quart

EFFECTS OF OVEREXPOSURE
Repeated inhalation of respirable dust for extended periods of time may cause injury to lungs.

EMERGENCY AND FIRST AID PROCEDURES
Wash eyes

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Clean-up. Use of recommended dustless method; water vacuum limit exposure so that it does not exceed OSHA standard TLV.

WASTE DISPOSAL METHOD

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	LOCAL EXHAUST: Follow OSHA standard	SPECIAL
	MECHANICAL *(General)*: Follow OSHA standard	OTHER

PROTECTIVE GLOVES: As required	EYE PROTECTION: Safety glasses with sides

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Use dustless system for handling, storage and clean-up so that exposure does not exceed OSHA standard TLV. Practice good housekeeping; maintain testing equipment, suggest posting work areas when product is used.

OTHER PRECAUTIONS

72-62-7820-01

MATERIAL SAFETY DATA SHEET

ASHLAND CHEMICAL COMPANY
DIVISION OF ASHLAND OIL, INC.
P.O. BOX 2219, COLUMBUS, OHIO 43215
(614) 889-3333

100112

Ashland

24-HOUR EMERGENCY TELEPHONE (606) 324-1133

ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILIAR TO O.S.H.A. FORM 20

RECEIVED
MAY 13 1988
R.E.F.C.

MAR78

W.I.N.100112,SALT,calcium chloride

SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: SALTS

HAZARD CLASSIFICATION: (99) NOT APPLICABLE

SECTION II-HAZARDOUS COMPONENTS

INGREDIENT	PERCENT	PEL	TLV		B
CALCIUM CHLORIDE	94		10	MG/CUM	

SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	NOT APPLICABLE	
VAPOR PRESSURE	NOT APPLICABLE	
VAPOR DENSITY	NOT APPLICABLE	
SPECIFIC GRAVITY		2.150 @ 77.00 DEG F (25.00 DEG C)
PERCENT VOLATILES	NOT APPLICABLE	
EVAPORATION RATE	NOT APPLICABLE	

SECTION IV-FIRE AND EXPLOSION DATA

FLASH POINT NOT APPLICABLE

EXPLOSIVE LIMIT NOT APPLICABLE

EXTINGUISHING MEDIA: WATER FOG

SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO KEEP FIRE-EXPOSED CONTAINERS COOL UNTIL FIRE IS OUT.

SECTION V-HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 10 MG/CUM

NOT ESTABLISHED FOR PRODUCT. SEE SECTION II.

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES - MAY CAUSE IRRITATION.
SKIN - MAY CAUSE IRRITATION.
BREATHING - OF DUST CAN CAUSE IRRITATION OF NASAL AND RESPIRATORY PASSAGES.
IF SWALLOWED - BY NATURE OF PRODUCT PROBLEMS NOT EXPECTED, BUT INDUSTRIAL PRODUCTS ARE NEVER MEANT TO BE SWALLOWED.

FIRST AID:

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDER CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY.

IF SWALLOWED: IMMEDIATELY DRINK TWO GLASSES OF WATER AND INDUCE VOMITING BY EITHER GIVING IPECAC SYRUP OR BY PLACING FINGER AT BACK OF THROAT. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

ASHLAND CHEMICAL COMPANY
DIVISION OF ASHLAND OIL, INC.
P.O. BOX 2219, COLUMBUS, OHIO 43215
(614) 889-3333

24-HOUR EMERGENCY TELEPHONE (606) 324-1133

SECTION VI-REACTIVITY DATA

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATABILITY: AVOID CONTACT WITH:, STRONG MINERAL ACIDS., NON-FERROUS METALS, FERROUS METALS

SECTION VII-SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

SMALL SPILL: SWEEP UP MATERIAL ONTO PAPER.

LARGE SPILL: COLLECT AND ADD SLOWLY TO LARGE VOLUME OF WATER.

WASTE DISPOSAL METHOD:

SMALL SPILL: PACKAGE MATERIAL IN PAPER AND DEPOSIT IN LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

LARGE SPILL: COLLECT AND ADD TO LARGE CONTAINER OF WATER. STIR IN SLIGHT EXCESS OF SODA ASH. LET STAND 24 HOURS. DECANT INTO ANOTHER CONTAINER, NEUTRALIZE WITH 6M-HYDROCHLORIC ACID. FLUSH DOWN DRAIN WITH LARGE EXCESS OF WATER IN ACCORDANCE WITH APPLICABLE REGULATIONS. DEPOSIT SLUDGE IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: NOT REQUIRED UNDER NORMAL CONDITIONS OF USE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW LEVEL OF OVEREXPOSURE (FROM KNOWN, SUSPECTED OR APPARENT ADVERSE EFFECTS).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES SUCH AS:, POLYVINYL CHLORIDE

EYE PROTECTION: WEAR SAFETY GLASSES IN COMPLIANCE WITH OSHA REGULATIONS. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: NORMAL WORK CLOTHING COVERING ARMS AND LEGS.

SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THE DATA SHEET MUST BE OBSERVED.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

100114

Material Safety Information

MURIATE OF POTASH AND POTASSIUM CHLORIDE

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER ■ OKLAHOMA CITY, OKLAHOMA 73125

June 1978

For more detailed information on the hazards of this product, contact Technical Service Department at the address above.

For emergency information, telephone 405 270-1313 any time.

Although we believe the information given here is correct, we recommend that you verify it with independent authoritative sources.

NOMENCLATURE

Chemical name	Potassium Chloride
Brand names	TRONA® muriate of potash KM® muriate of potash TRONA® potassium chloride KM® potassium chloride
Common name	Potash
Formula	KCl
Shipping names:	
DOT	Not applicable
IATA	Not applicable
CAS number	7447-40-7
pH of 1% solution	9.2

PHYSICAL PROPERTIES

State	Granular solid
Melting point °C	776° C
Boiling point °C	
Color	White to grey
Odor	None
Bulk density, lb/cu ft	58 to 67
Weight per gallon, lb	
Water solubility, % by wt @ 20°C	25.5

HAZARDOUS INGREDIENTS

COMPONENT	CAS NUMBER	%	HAZARD
None			

CHEMICAL REACTIVITY

A stable salt

STABILITY

A stable salt

FIRE HAZARD and FIRE FIGHTING PROCEDURES

Not flammable. Does not support combustion.

HEALTH HAZARDS

	HAZARD CLASSIFICATION	EFFECTS
INHALATION	Irritant	Minor local irritation
EYE CONTACT	Irritant	Minor local irritation
SKIN CONTACT	Irritant	Minor local irritation
INGESTION	Irritant	Gastrointestinal irritation

EFFECTS OF OVEREXPOSURE

Unknown. Probably slight.

WARNING PROPERTIES

None

TOXICITY

Not considered an industrial poison.

FIRST AID

	WHAT TO DO
INHALATION	Obtain medical attention in severe cases.
EYE CONTACT	Wash thoroughly with running water for at least 15 minutes. Obtain medical attention.
SKIN CONTACT	Wash thoroughly with water. Obtain medical attention.
INGESTION	No special procedures are required.

NOTE TO PHYSICIANS

PRECAUTIONS FOR NORMAL USE

No special procedure required.

ESHOLD LIMIT VALUE[1]

Nuisance particulate level is 10mg/m^3 of total dust <1% quartz or 5 mg/m^3 respirable dust.

RECOMMENDED SAFETY EQUIPMENT

Dust respirator when necessary.

CORROSIVITY TO MATERIALS OF CONSTRUCTION

Moist material mildly corrosive to carbon steel. Aluminum and carbon steel are not a suitable material at low liquid concentrations and ambient temperatures. Rubber-lined carbon steel or FRP construction is suitable for service temperatures under 160°F.

STORAGE

No special procedures

CONTAINER DISPOSAL

No special procedures.

UNUSED MATERIAL and WASTE DISPOSAL

Solid material: bury in an appropriate chemical dump. Solutions can be diluted with large volume of water.

HANDLING SPILLS

Dry spill: Sweep up and dispose as above.
Solution spill: Wash into a drain or an industrial sewer using a large volume of water.

REFERENCES

[1] Threshold Limit Values for Chemical Substances and Physical Agents for 1977 - ACGIH. P.O. Box 1937. Cincinnati, OH 45201.

100495

Material Safety Data Sheet

Genium Publishing Corporation
1145 Catalyn Street
Schenectady, NY 12303-1836 USA
(518) 377-8855

GENIUM PUBLISHING CORP.

No. 180

SODIUM CHLORIDE

Issued: March 1986

SECTION 1. MATERIAL IDENTIFICATION 20

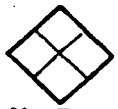
MATERIAL NAME: Sodium Chloride

DESCRIPTION: Colorless (white) transparent or white crystals.

OTHER DESIGNATIONS: Common Salt, HALIK, Halite, Rock Salt, Saline, Salt, Sea Salt, Table Salt, NaCl.

MANUFACTURER/SUPPLIER: Available from many suppliers.

HMIS
H: 1
F: 0
R: 0
PPE*
*See sect. 8



SECTION 2. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Sodium Chloride (CAS #7647-14-5) W.I.N.100116,BLOCK,NaCl,coarse rock salt,S-6 W.I.N.100218,BLOCK,Westblock 1 W.I.N.100258,COMPONENT,flour salt W.I.N.100404,SALT,NaCl,fine rock salt, Cement & Stim. W.I.N.100495,SALT,NaCl,medium rock salt, Cemt & Stim.	>98	No OSHA PEL. No ACGIH TLV. Human, Oral, TDLo: 12357 mg/kg Rat, Oral, LD_{50}: 3000 mg/kg Rabbit, Skin: 500 mg/24 Hrs., Mild Rabbit, Eye: 100 mg/24 Hrs., Severe

SECTION 3. PHYSICAL DATA

Boiling Point ... 2575°F (1413°C)
Vapor Pressure ... 1 mm @ 865°C
Water Solubility ... 37%
Vapor Density (Air = 1) ... Not Found
Evaporation Rate ... Not Found

Specific Gravity (H_2O = 1) ... 2.2
Melting Point ... 1474°F (801°C)
Percent Volatile by Volume ... Not Found
Molecular Weight ... 58.45

Appearance and odor: Colorless transparent crystal or white crystalline powder.

COMMENTS: Sodium Chloride maintains a neutral pH in solution and is slightly soluble in alcohol or liquid ammonia.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits In Air	LOWER	UPPER
Not Flammable	Not Found	Not Found	Not Found	Not Found

EXTINGUISHING MEDIA: Sodium chloride presents a negligible fire or explosion hazard as a dust when it is exposed to heat or flame. The extinguishing media for fires involving sodium chloride depend on the surrounding chemical environment.
UNUSUAL FIRE/EXPLOSION HAZARDS: Sodium Chloride should not be used as a fire-extinguishing medium on fires involving lithium. Sodium chloride and lithium will react to yield elemental sodium, which will cause the fire to burn more violently.
SPECIAL FIRE-FIGHTING PROCEDURES: A self-contained breathing apparatus with a full facepiece is recommended for fire fighters.

SECTION 5. REACTIVITY DATA

Sodium chloride is stable. Hazardous polymerization cannot occur. CHEMICAL INCOMPATIBILITIES: Under conditions of high heat, sodium chloride will react with lithium and release elemental sodium, which will intensify fire conditions. Sodium chloride will react with most nonnoble metals (such as iron or steel), building materials (such as cement), bromine, or trifluoride. CONDITIONS TO AVOID: Avoid heating sodium chloride to the boiling point in moist environments. Sodium chloride will sublime at 2579°F (1415°C).
There are no hazardous decomposition products of this material under normal temperatures and pressures.
COMMENTS: Sodium chloride in the ionized state (water solution) is highly corrosive to many construction metals; therefore consideration of such potential for corrosion must be considered prior to exposing a material to sodium chloride/water solutions.

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W.I.N.100218,BLOCK,Westblock 1
W.I.N.100258,COMPONENT,flour salt
W.I.N.100404,SALT,NaCl,fine rock salt, Cement & Stim.
W.I.N.100495,SALT,NaCl,medium rock salt, Cemt & Stim.

No. 180 3/86 SODIUM CHLORIDE

SECTION 6: HEALTH HAZARD INFORMATION | TLV

Sodium chloride is not listed as a carcinogen by the NTP, IARC, or OSHA. SUMMARY OF RISKS: Sodium Chloride is not normally considered hazardous; however, exposure to high concentrations of this material as a solid, particulate, or water solution may cause irritation of the upper respiratory tract, eyes, or skin. Ingestion of a large dose may cause nausea or vomiting. Removal from exposure or washing the affected body part will normally remove symptoms. TARGET ORGANS: Eyes, upper respiratory tract, mucous membrane, or skin. PRIMARY ENTRY: Inhalation, ingestion, or dermal contact. ACUTE EFFECTS: The degree of irritation to an organ depends on the size of the dose and the duration of exposure. CHRONIC EFFECTS: Chronic exposure to moderate levels of sodium chloride may cause elevation of blood pressure in sodium-sensitive individuals, who make up approximately 5 to 10% of the population.
FIRST AID:
EYE CONTACT: Acute exposure to sodium chloride will cause redness, pain, and irritation of the eyes. Wash the eyes immediately with large amounts of water for about 15 minutes, including under the eyelids, until no evidence of the chemical remains. Get medical attention.*
SKIN CONTACT: Acute skin exposure may cause irritation and skin dehydration. Remove contaminated clothing immediately and wash affected skin well with water.
INHALATION: Inhalation of high concentrations of salt crystals or dust may produce upper respiratory irritation and coughing. Remove victim to fresh air.
INGESTION: Ingestion of large amounts of sodium chloride may cause nausea and vomiting, rigidity, or convulsions. Continued exposure can produce coma, dehydration, and internal organ congestion. If the victim is conscious, give him 2 to 4 glasses of water and induce vomiting. Get medical attention immediately.*
COMMENTS: Normal removal from exposure and washing the affected organ with water will reduce adverse symptoms.

* GET MEDICAL ASSISTANCE = In plant, paramedic, community. Get medical help for further treatment, observation, and support after first aid, if indicated.

SECTION 7: SPILL, LEAK, AND DISPOSAL PROCEDURES

SPILL/LEAK: Notify safety personnel of large spills, clean up with corrosion-resistant tools. Minimize generation of dust to reduce upper respiratory irritation. Ventilate confined areas and collect spilled material in suitable corrosion-resistant containers.

WASTE DISPOSAL: Dispose of unsalvageable waste in an approved landfill considering Federal, state, and local waste-disposal regulations.

EPA, Clean Water Act, or Reportable Spill Quantity not found.

SECTION 8: SPECIAL PROTECTION INFORMATION

GOGGLES: Employees should wear rustproof safety goggles to prevent contact of sodium chloride with eyes.
GLOVES: Protective gloves are not required but are recommended.
RESPIRATOR: A dust mask should be worn where there is a possibility of high-level exposure to airborne particulate.
VENTILATION: Where dust buildup is possible, provide general dilution ventilation.
OTHER: An eyewash station should be available near sodium chloride use areas. Contact lens use near sodium chloride handling areas should be prohibited because they pose a special hazard; soft lenses may absorb salt, and all lenses concentrate irritants.

SECTION 9: SPECIAL PRECAUTIONS AND COMMENTS

STORAGE SEGREGATION: Sodium chloride does not require special storage segregation. However, because salt is highly soluble in water, dry forms of sodium chloride should be stored in cool, dry, well-ventilated storage areas, preferably in waterproof containers.
SPECIAL HANDLING/STORAGE: Storage containers should be resistant to salt corrosion.
ENGINEERING CONTROLS: Dilution ventilation (opening windows and turning on a fan) may be necessary to reduce high concentrations of dust. Dehumidification of storage areas may be necessary in moist environments.
OTHER PRECAUTIONS: Prevent prolonged contact with the skin or other organs. Follow good personal hygiene practices. Wash after handling this material.
COMMENTS: Remove severely contaminated clothing and launder before reuse.

Data Source(s) Code: 2-12, 14, 59, 61, 62, 82, 84. OW

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Approvals JO Raccuia, 11/86
Indust. Hygiene/Safety DJW 10/86
Medical Review

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10012-9

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MAY 13 1988
R.E.F.C.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 10MAR88

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS blend	TRADE NAME AND SYNONYMS SCALE INHIBITOR, P-9
CHEMICAL FAMILY phosphate ester	FORMULA W.I.N. 100129

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid, n.o.s. (RQ33000/15000)
NAME OF HAZARDOUS COMPONENT	methanol
HAZARD CLASS	Flammable material
IDENTIFICATION NUMBER	UN1993
D.O.T. LABEL(S) REQUIRED	Flammable liquid
PRECAUTIONARY LABEL	See Page 4

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
ethylene glycol 107-21-1	15	
methanol 67-56-1	15	200 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1) @ 60°F		1.09
VAPOR PRESSURE (mm Hg.) @ 100°F	101	PERCENT, VOLATILE BY VOLUME (%) @ 75°F		11
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)		
SOLUBILITY IN WATER	dispersible	pH neat		4.4
APPEARANCE AND ODOR	clear colorless liquid, sweet odor			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
98°F(TCC)			

EXTINGUISHING MEDIA
Dry chemical, alcohol foam, CO_2 or other suitable for class B fires.

SPECIAL FIRE FIGHTING PROCEDURES
Use water to cool containers exposed to fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS
May evolve nitrogen oxides if burning

(Continued on reverse side)

Form OSHA-20

TRADE NAME: W.I.N. 100129, SCALE INHIBITOR, P-9

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
50 ppm for ethylene glycol, 200 ppm for methanol, see section IXA

EFFECTS OF OVEREXPOSURE May cause irritation with prolonged skin or eye contact. May cause blindness if ingested. Can cause depression of central nervous system, nausea, dizziness, vomiting if ingested.

EMERGENCY AND FIRST AID PROCEDURES
Prolonged inhalation of vapor may cause nausea, vomiting, dizziness or unconsciousness see Section X, Page 4

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS
oxides of carbon and nitrogen if burning

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Dike to prevent large spills from further movement and reclaim into salvage drums or tank truck for disposal. Absorb residue and small spills on clay, soil or commercial absorbant.

WASTE DISPOSAL METHOD
If this product becomes a waste it is hazardous waste and must be solidified before disposal in a land fill. It can be incenerated in accordance with local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
not normally required due to low toxicity and volatility

VENTILATION	LOCAL EXHAUST recommend	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES impermeable	EYE PROTECTION chemical goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS

100129

RECEIVED
MAY 13 1988
R.E.F.C.

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

DATE: 10MAR88

SECTION I	
Supplier's Name The Western Company of North America	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS blend	TRADE NAME AND SYNONYMS SCALE INHIBITOR, P-9
CHEMICAL FAMILY phosphate ester	FORMULA W.I.N. 100129

SECTION IXA - - SPECIAL PRECAUTIONS

Toxicology Information:

ACUTE TOXICITY SUTDIES: Acute toxicity studies have been conducted on this product along with acute toxicity studies on the hazardous ingredients in Section 2. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS):
Ethylene glycol LD_{50} = 6,000 - 8,000 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS):
Ethylene glycol (estimated) LD_{50} = 1,000 - 3,000 mg/kg

ACUTE INHALATION TOXICITY (ALBINO RATS):
Ethylene glycol = Saturated vapor atmosphere no deaths (8-hour exposure)

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):
SKIN IRRITATION INDEX DRAIZE RATING:
0.5/8.0 Ethylene glycol

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):
EYE IRRITATION INDEX DRAIZE RATING:
0-15/110.0 Ethylene glycol

CHRONIC TOXICITY RESULTS: A 2-year feeding study in rats with 1 - 2% ethylene glycol, produced liver and kidney injury.

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

DATE: 10MAR88

SECTION I	
Supplier's Name The Western Company of North America	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS blend	TRADE NAME AND SYNONYMS SCALE INHIBITOR, P-9
CHEMICAL FAMILY phosphate ester	FORMULA W.I.N. 100129

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

WARNING!

Flammable. Contains methanol. May cause blindness if swallowed. May cause irritation to skin and eyes. Do not use, store, spill or pour near heat, sparks or open flames. Keep container closed when not in use. Use with adequate ventilation. Do not take internally. Avoid prolonged or repeated breathing of vapor. Avoid contact with skin, eyes and clothing.

FIRST AID:
FOR EYES: In case of contact, flush with water for 15 minutes. Call a physician.

FOR SKIN: In case of contact, wash thoroughly with soap & water. Call a physician.

FOR INGESTION: If swallowed, induce vomiting. Give water. Call a physician.

HANDLING: Employees must wear impermeable gloves and chemical goggles.

ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Donot cut, puncture or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

10012-7

RECEIVED
MAY 13 1988
R.E.F.C.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 10MAR88

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
blend	SCALE INHIBITOR, P-8
CHEMICAL FAMILY: phosphonate	FORMULA: W.I.N. 100127

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid, n.o.s. (RQ 1000/454)
NAME OF HAZARDOUS COMPONENT	methanol
HAZARD CLASS	flammable material
IDENTIFICATION NUMBER	UN1993
D.O.T. LABEL(S) REQUIRED	flammable liquid
PRECAUTIONARY LABEL	see page 3

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
methanol	10	200 ppm
thiourea	05	

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1) @ 60°F	1.208
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	67
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	soluble		

APPEARANCE AND ODOR: amber colored liquid. Foul odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
92 F SFCC (ASTM D3243)			

EXTINGUISHING MEDIA: CO_2 or dry powder

SPECIAL FIRE FIGHTING PROCEDURES: Breathing apparatus may be necessary if material is burning

UNUSUAL FIRE AND EXPLOSION HAZARDS: flammable liquid

(Continued on reverse side)

Form OSHA-20

TRADE NAME: W.I.N. 100127, SCALE INHIBITOR, P-8

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: 200 ppm for methanol

EFFECTS OF OVEREXPOSURE: May cause skin and eye irritation. LD_{50} (rats) oral greater than 16 g/kg. LD_{50} (rats) dermal greater than 20 g/kg. LC_{50} inhalation greater than 15 mg/L.

EMERGENCY AND FIRST AID PROCEDURES: Flush eyes with water and get medical attention. Wash skin with soap and water. Administer oxygen if necessary.

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE	X	

INCOMPATABILITY (*Materials to avoid*): strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: oxides of nitrogen, phosphorous and sulfur. Hydrochloric acid

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dike to prevent entering any waterway. Cover with sand, dirt or suitable chemical adsorbant.

WASTE DISPOSAL METHOD: After material is adsorbed pick up sand, dirt or chemical adsorbant and take to an approved land fill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (*Specify type*): chemical respirator with organic cartridge

VENTILATION		
	LOCAL EXHAUST: recommended	SPECIAL
	MECHANICAL (*General*)	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
synthetic	chemical goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Avoid sparks or open flames.

OTHER PRECAUTIONS

100127

RECEIVED
MAY 13 1988
R.E.F.C.

Attachment to and continuation of

MATERIAL SAFETY DATA SHEET

DATE: 10MAR88

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS blend	TRADE NAME AND SYNONYMS SCALE INHIBITOR, P-8
CHEMICAL FAMILY phosphonate	FORMULA W.I.N. 100127

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

WARNING!

FLAMMABLE keep away from heat, sparks, and open flame.
Keep container closed.
Use adequate ventilation.
In case of fire use water spray, foam, dry chemical or CO_2.
MAY CAUSE IRRITATION
Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.

FIRST AID:
FOR EYES: In case of contact, flush eyes with water, get medical attention.

FOR SKIN: In case of contact, wash with soap and water. Wash clothing before reuse.

FOR INHALATION: If breathed in, administer oxygen if necessary.

HANDLING: Employees must wear synthetic gloves and chemical goggles.

ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Donot cut, puncture or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

GRACE

Organic Chemicals Division
W.R. Grace & Co.
55 Hayden Avenue
Lexington, Mass. 02173

MATERIAL SAFETY DATA

EMERGENCY TELEPHONE NO: 603-888-2320

SECTION ONE - PRODUCT DESCRIPTION

TRADE NAME: **HAMPSHIRE® NTA ACID**
MSDS NUMBER: 1019

MSDS RELEASE DATE: 11/15/85

RECEIVED
JUL 2 6 1989
R.E.F.C.

CHEMICAL DESCRIPTION: Nitrilotriacetic acid powder.
SYNONYMS: N,N-bis(carboxymethyl)glycine; triglycollamic acid.

PRODUCT TSCA/CAS NUMBER: 139-13-9

SECTION TWO - HAZARDOUS INGREDIENTS

CHEMICAL & CAS NO.	%PRESENT	TLV or PEL
Nitrilotriacetic acid [139-13-9]	99	N.A.

SEE SECTION TEN - REGULATORY COMMENT about NTA.

SECTION THREE - PHYSICAL DATA

BOILING POINT: Not applicable (N.A.)
VAPOR PRESSURE: N.A.
VAPOR DENSITY: N.A.
WATER SOLUBILITY: Insoluble.
APPEARANCE: White crystalline powder.
SPECIFIC GRAVITY: N.A.
% VOLATILE BY WT: N.A.
EVAPORATION RATE: N.A.
pH OF SATURATED SOLUTION: About 2 to 3.
ODOR: None.

SECTION FOUR - FIRE FIGHTING DATA

FLASH POINT: Noncombustible. METHOD USED: Closed cup.

FLAMMABLE LIMIT - LEL: N.A. UEL: N.A.

EXTINGUISHING MEDIA: Does not burn.

SPECIAL FIRE FIGHTING PROCEDURES: If product is present in fire and threat of decomposition or dusting exists, wear self contained breathing apparatus with full face piece.

UNUSUAL FIRE & EXPLOSION HAZARDS: None.

The information contained herein is based upon data considered true and accurate. However, Grace makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or the results to be obtained from the use thereof. This information is offered soley for the user's consideration, investigation and verification. Since the use and conditions of use of this information and the material described herein are not within the control of Grace, Grace assumes no responsibility for injury to the user or third persons. The material described herein is sold only pursuant to Grace's Terms and Conditions of Sale, including those limiting warranties and remedies contained therein. It is the responsibility of the user to determine whether any use of this data and information is in accordance with applicable federal, state or local laws and regulations.

SECTION FIVE - HEALTH & FIRST AID DATA

THRESHOLD LIMIT VALUE: None established.

EFFECTS OF OVER EXPOSURE: Inhaling dust may cause coughing, wheezing, repiratory distress and mucous membrane irritation. Dust may irritate eyes and skin. Product is a chelating agent and ingestion of large amounts may cause hypocalcemic tetany with spontaneous recovery.

EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT	- Flush immediately with large amounts of water for at least15 minutes, repeatedly holding eyelids open. Call a physician immediately.
SKIN CONTACT	- Wash with plenty of soap and water. Wash clothing before reuse. See a physician if skin shows signs of irritation.
INGESTION	- Call a physician immediately if significant amounts have been swallowed. Give the employee large amounts of water or milk to drink for dilution effect. Do not induce vomiting.
INHALATION	- If large amounts of dust have been inhaled, move the exposed employee to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep employee warm and at rest. Call a physician immediately.

SECTION SIX - REACTIVITY DATA

STABILITY: Stable.
CONDITIONS TO AVOID IF UNSTABLE: Not applicable.

INCOMPATIBILITY WITH OTHER MATERIALS: None.

HAZARDOUS DECOMPOSITION PRODUCTS: None.

HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID UNCONTROLLED POLYMERIZATION: Not applicable.

SECTION SEVEN - SPILL & DISPOSAL PROCEDURES

STEPS TO BE TAKEN TO HANDLE SPILLS OR RELEASES: Prevent product from entering drinking water supplies or streams. Collect product and package for disposal according to local, state, and federal regulations.

WASTE DISPOSAL PROCEDURES: This product is not a federal hazardous waste according to EPA regulation 40 CFR 261. Dispose of waste product in accordance with state and local regulations.

SECTION EIGHT - PERSONNEL PROTECTION INFORMATION

RESPIRITATORY PROTECTION: Use a respirator approved by NIOSH for nuisance dust.

VENTILATION: Hoods or locals exhaust can be used to supplement mechanical or general industrial ventilation to eliminate dusting.

PROTECTIVE GLOVES: Wear impervious gloves.

EYE PROTECTION: Chemical safety goggles with side shields or face sheild to prevent eye contact. As a general rule, do not wear contact lenses when handling chemicals.

OTHER PROTECTIVE EQUIPMENT: Wear impervious clothes.

SECTION NINE - SPECIAL PRECAUTIONS

Do not store in contact with aluminum or copper.

Handle as an acidic powder.

SECTION TEN - REGULATORY COMMENTS & OTHER EFFECTS.

OSHA.....Based on tests with laboratory rats and mice at high feeding levels, the National Toxicology Program (NTP) has listed nitrilotriacetic acid (NTA) as a suspect carcinogen. According to the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines, NTA would not "be considered an occupational carcinogen of any practical significance." There is no evidence that NTA is a human carcinogen.

MATERIAL SAFETY DATA SHEET ADDENDUM

GRACE
Organic Chemicals Division
55 Hayden Avenue
Lexington, Massachusetts 02173

December 1, 1988

Hampshire NTA Acid

Ingredients present in product that may require reporting under Section 313 of SARA Title III as defined in 40 CFR 372:
Nitrilotriacetic acid

499587

GRACE

Organic Chemicals Division
W.R. Grace & Co.
55 Hayden Avenue
Lexington, Mass. 02173

MATERIAL SAFETY DATA

EMERGENCY TELEPHONE NO: 603-888-2320

SECTION ONE - PRODUCT DESCRIPTION

TRADE NAME: HAMPSHIRE® NTA ACID
MSDS NUMBER: 1019

MSDS RELEASE DATE: 11/15/85

CHEMICAL DESCRIPTION: Nitrilotriacetic acid powder.
SYNONYMS: N,N-bis(carboxymethyl)glycine; triglycollamic acid.

PRODUCT TSCA/CAS NUMBER: 139-13-9

SECTION TWO - HAZARDOUS INGREDIENTS

CHEMICAL & CAS NO.	%PRESENT	TLV or PEL
Nitrilotriacetic acid [139-13-9]	99	N.A.

SEE SECTION TEN - REGULATORY COMMENT about NTA.

SECTION THREE - PHYSICAL DATA

BOILING POINT: Not applicable (N.A.)
VAPOR PRESSURE: N.A.
VAPOR DENSITY: N.A.
WATER SOLUBILITY: Insoluble.
APPEARANCE: White crystalline powder.

SPECIFIC GRAVITY: N.A.
% VOLATILE BY WT: N.A.
EVAPORATION RATE: N.A.
pH OF SATURATED SOLUTION: About 2 to 3.
ODOR: None.

SECTION FOUR - FIRE FIGHTING DATA

FLASH POINT: Noncombustible.

METHOD USED: Closed cup.

FLAMMABLE LIMIT - LEL: N.A. UEL: N.A.

EXTINGUISHING MEDIA: Does not burn.

SPECIAL FIRE FIGHTING PROCEDURES: If product is present in fire and threat of decomposition or dusting exists, wear self contained breathing apparatus with full face piece.

UNUSUAL FIRE & EXPLOSION HAZARDS: None.

The information contained herein is based upon data considered true and accurate. However, Grace makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or the results to be obtained from the use thereof. This information is offered solely for the user's consideration, investigation and verification. Since the use and conditions of use of this information and the material described herein are not within the control of Grace, Grace assumes no responsibility for injury to the user or third persons. The material described herein is sold only pursuant to Grace's Terms and Conditions of Sale, including those limiting warranties and remedies contained therein. It is the responsibility of the user to determine whether any use of this data and information is in accordance with applicable federal, state or

SECTION FIVE - HEALTH & FIRST AID DATA

THRESHOLD LIMIT VALUE: None established.

EFFECTS OF OVER EXPOSURE: Inhaling dust may cause coughing, wheezing, repiratory distress and mucous membrane irritation. Dust may irritate eyes and skin. Product is a chelating agent and ingestion of large amounts may cause hypocalcemic tetany with spontaneous recovery.

EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT - Flush immediately with large amounts of water for at least15 minutes, repeatedly holding eyelids open. Call a physician immediately.

SKIN CONTACT - Wash with plenty of soap and water. Wash clothing before reuse. See a physician if skin shows signs of irritation.

INGESTION - Call a physician immediately if significant amounts have been swallowed. Give the employee large amounts of water or milk to drink for dilution effect. Do not induce vomiting.

INHALATION - If large amounts of dust have been inhaled, move the exposed employee to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep employee warm and at rest. Call a physician immediately.

SECTION SIX - REACTIVITY DATA

STABILITY: Stable.
CONDITIONS TO AVOID IF UNSTABLE: Not applicable.

INCOMPATIBILITY WITH OTHER MATERIALS: None.

HAZARDOUS DECOMPOSITION PRODUCTS: None.

HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID UNCONTROLLED POLYMERIZATION: Not applicable.

SECTION SEVEN - SPILL & DISPOSAL PROCEDURES

STEPS TO BE TAKEN TO HANDLE SPILLS OR RELEASES: Prevent product from entering drinking water supplies or streams. Collect product and package for disposal according to local, state, and federal regulations.

WASTE DISPOSAL PROCEDURES: This product is not a federal hazardous waste according to EPA regulation 40 CFR 261. Dispose of waste product in accordance with state and local regulations.

SECTION EIGHT - PERSONNEL PROTECTION INFORMATION

RESPIRITATORY PROTECTION: Use a respirator approved by NIOSH for nuisance dust.

VENTILATION: Hoods or locals exhaust can be used to supplement mechanical or general industrial ventilation to elimnate dusting.

PROTECTIVE GLOVES: Wear impervious gloves.

EYE PROTECTION: Chemical safety goggles with side shields or face sheild to prevent eye contact. As a general rule, do not wear contact lenses when handling chemicals.

OTHER PROTECTIVE EQUIPMENT: Wear impervious clothes.

SECTION NINE - SPECIAL PRECAUTIONS

Do not store in contact with aluminum or copper.

Handle as an acidic powder.

SECTION TEN - REGULATORY COMMENTS & OTHER EFFECTS.

OSHA.....Based on tests with laboratory rats and mice at high feeding levels, the National Toxicology Program (NTP) has listed nitrilotriacetic acid (NTA) as a suspect carcinogen. According to the American Conference of Governmental Industrial Hygienists (ACGIH) guidelines, NTA would not "be considered an occupational carcinogen of any practical significance." There is no evidence that NTA is a human carcinogen.

499588

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Date: October 24, 1990

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Silicon Dioxide, Amorphous, Silica, Fumed	TRADE NAME AND SYNONYMS Silica Fume
CHEMICAL FAMILY Silica	FORMULA SiO_2 W.I.N. 499588

SECTION IA - HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME N/A	(RQ /)
NAME OF HAZARDOUS COMPONENT Not regulated	
HAZARD CLASS Health	
IDENTIFICATION NUMBER CAS No. 7631-86-9	
D.O.T. LABEL(S) REQUIRED	
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
Silicon Dioxide - amorphous, fumed (SiO_2)	87 98	80 mg/m^3 OSHA 20 mpp CF
Magnesium Oxide (MgO)	.1 5	15 mg/m^3 as fume 10 mg/m^3 as fume
Iron Oxide (Fe_2O_3)	.1 5	10 mg/m^3 as fume 5 mg/m^3 as fume
Carbon	1-3	3.5 mg/m^3
Calcium Oxide (CaO)	< 2	5 mg/m^3

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)/MELTING POINT	2300°C	SPECIFIC GRAVITY (H_2O=1)	0.25
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____=1)	N/A
SOLUBILITY IN WATER	Insoluble		

APPEARANCE AND ODOR Medium grey submicron powder, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	FLAMMABLE LIMITS N/A	Lel	Uel

EXTINGUISHING MEDIA None needed

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS None

(Continued on next page)

499588

TRADE NAME: W.I.N. 499588

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Unknown

EFFECTS OF OVEREXPOSURE Inhalation: Coughing, sneezing. Eye Contact: Irritation.

EMERGENCY AND FIRST AID PROCEDURES Inhalation: Remove victim from exposure. Eye Contact: Flush eyes with water.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY (Materials to avoid) Silica fume is soluble in hydrofluoric acid.

HAZARDOUS DECOMPOSITION PRODUCTS None.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Vacuum cleaner is recommended to recover spilled material.

WASTE DISPOSAL METHOD Prevent airborne emissions. Treat as inert and non-toxic.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) In dusty areas, use NIOSH approved Sch 21 respiratory protection.

VENTILATION	LOCAL EXHAUST In dusty areas.	SPECIAL
	MECHANICAL (General)	OTHER

PROTECTIVE GLOVES

EYE PROTECTION Safety goggles

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Silica fume may cause drying of exposed skin after prolonged exposure.

OTHER PRECAUTIONS

100318

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE:

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 186, Ft. Worth, TX 76101

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
	THIXAD
CHEMICAL FAMILY	FORMULA
	Proprietary blend

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Not regulated
NAME OF HAZARDOUS COMPONENT	N/A
HAZARD CLASS	N/A
IDENTIFICATION NUMBER	N/A
D.O.T. LABEL(S) REQUIRED	N/A
PRECAUTIONARY LABEL	

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
None		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H_2O=1)	2.3
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	Cold-.2 Hot-Slight		
APPEARANCE AND ODOR	White powder - odorless		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
Nonflammable O/F Open Flame		Nonflammable	

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES
None

UNUSUAL FIRE AND EXPLOSION HAZARDS
None

(Continued on reverse side)

TRADE NAME: THIXAD

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

Oral ingestion: no effect, eye contact: slight irritation 0 no ill effects, skin contact: no effect, skin absorption - none.

EMERGENCY AND FIRST AID PROCEDURES

Eye: wash with water. Skin: wash with water. Inhalation: none - treated as nuisance dust. Ingestion: none (Industrial Health, Vol. 12, No. 3, Sept. 1955).

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: None
	STABLE		None

INCOMPATABILITY *(Materials to avoid)*

None

HAZARDOUS DECOMPOSITION PRODUCTS

None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: None
	WILL NOT OCCUR		None

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

May be cleaned up with normal housekeeping procedures.

WASTE DISPOSAL METHOD

Any normal disposal method.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

Non-nuisance dust equipment when conditions demand.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES: Not normally necessary	EYE PROTECTION: Not normally necessary

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in dry place to prevent setting and bag breakage. No detrimental health effects.

OTHER PRECAUTIONS

None

499680

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Date: October 28, 1991

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5433
ADDRESS (Number, Street, City, State and ZIP Code) 515 Post Oak Blvd., Houston, Texas 77027	
CHEMICAL NAME AND SYNONYMS Anti-Static Agent	TRADE NAME AND SYNONYMS Static Free
CHEMICAL FAMILY Silica Flour	FORMULA Proprietary W.I.N. 499680

SECTION IA - HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME Oilwell Treating Compound (RQ / N/A)

NAME OF HAZARDOUS COMPONENT N/A

HAZARD CLASS N/A

IDENTIFICATION NUMBER N/A Silica CAS: 7631-86-9

D.O.T. LABEL(S) REQUIRED None

PRECAUTIONARY LABEL

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
N/A		

SECTION III - PHYSICAL DATA

BOILING POINT (°F) N/A		SPECIFIC GRAVITY (H_2O=1)	
VAPOR PRESSURE (mm Hg) N/A		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1) > 1		EVAPORATION RATE (_____=1)	N/A
SOLUBILITY IN WATER Dispersible			

APPEARANCE AND ODOR Milky white dispersion; ordorless

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) > 200°F (TCC)	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA Use foam dry chemical. CO2, water fog or spray

SPECIAL FIRE FIGHTING PROCEDURES NIOSH/MSHA approved, self-contained breathing apparatus. Cool exposed containers with water spray. Avoid vapors.

UNUSUAL FIRE AND EXPLOSION HAZARDS No unusual fire hazards; material is not flammable and/or combustible

(Continued on next page)

TRADE NAME: W.I.N. 499680

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE Inhalation: Inhalation of high levels of vapors or mists may cause lightheadedness, dizziness, headaches or unconsiousness

EMERGENCY AND FIRST AID PROCEDURES Eyes: Flush with plenty of water. If irritation develops, call a physician. Skin Contact: Remove contaminated clothes. Wash skin thoroughly with mild soap and water. Inhalation: Remove to fresh air. If labored breathing continues, contact a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY (Materials to avoid) Oxidizers; heat sparks, or open flame

HAZARDOUS DECOMPOSITION PRODUCTS carbon monoxide

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED If dry, shovel, vacuum, or sweep up spilled materials. Wet materials will be extremely slippery.

WASTE DISPOSAL METHOD Handle as non-hazardous material.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

VENTILATION	LOCAL EXHAUST	X	SPECIAL
	MECHANICAL (General)		OTHER

PROTECTIVE GLOVES Chemical Resistant Gloves

EYE PROTECTION Goggles

OTHER PROTECTIVE EQUIPMENT In heavy dust concentration, a NIOSH approved mask is recommended.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Keep container closed when not in use. Wear suitable protection for eyes and skin when handling. Avoid contact with ozidizers. Store in well-ventilated area. Store in cool, dry area.

OTHER PRECAUTIONS

(Continued on next page)

Form OSHA-20

499680

ATTACHMENT TO AND CONTINUATION OF

MATERIAL SAFETY DATA SHEET

Date: October 28, 1991

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5433
ADDRESS (Number, Street, City, State and ZIP Code) 515 Post Oak Blvd., Houston, Texas 77027	
CHEMICAL NAME AND SYNONYMS Anti-Static Agent	TRADE NAME AND SYNONYMS Static Free
CHEMICAL FAMILY Silica Flour	FORMULA W.I.N. 499680

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

FIRST AID:

FOR EYES : In case of contact, flush with plenty of clean water for at least 15 minutes. Call a physician.

FOR SKIN : In case of contact, ordinary measures of personal hygiene should be adequate.

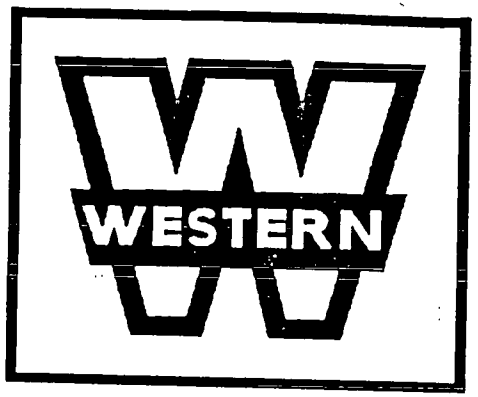
FOR INGESTION: If swallowed, essentially non-toxic.

FOR INHALATION: If breathed in, excessive inhalation of dust may impede respiration.

FOR HANDLING: Employees must wear chemical resistant gloves and chemical safety goggles.

ATTENTION!! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Do not cut, puncture, or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

(Continued on next page)



Western Petroleum Services

WIN 499680

STATIC FREE

ANTI-STATIC AGENT

Flash Point: > 200° F
Net Content: 40 pounds (18.4 kg)
5 gallons (18.9 liters) @ 25° C

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s): 2475.0W, 2475.0Y

FOR INDUSTRIAL USE ONLY

WARNING: STORE IN COOL AND DRY PLACE.

FIRST AID:

FOR EYES:	In case of contact, flush with plenty of clean water for at least 15 minutes. Call a physician.
FOR SKIN:	In case of contact, ordinary measures of personal hygiene should be adequate.
FOR INGESTION:	If swallowed, essentially non-toxic.
FOR INHALATION:	If breathed in, excessive inhalation of dust may impede respiration.
HANDLING:	Employees must wear chemical resistant gloves and chemical safety goggles.
ATTENTION:	After this container has been emptied, it may contain flammable toxic liquid or vapor; observe all warnings and precautions listed for this product. DO NOT cut, puncture or weld on or near this container.

Refer to MSDS for Safety Requirements.

Manufactured for:

THE WESTERN COMPANY OF NORTH AMERICA

515 Post Oak Blvd., Houston, Texas 77027

Emergency Telephone: 1-800-424-9300

499680

R-3G1 (01/86)

499684

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Date: February 28, 1991

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Blend	TRADE NAME AND SYNONYMS LT-32
CHEMICAL FAMILY Nonionic Surfactant	FORMULA Proprietary Blend W.I.N. 499684

SECTION IA - HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid (RQ /)
NAME OF HAZARDOUS COMPONENT	Isopropanol
HAZARD CLASS	Flammable liquid
IDENTIFICATION NUMBER	UN 1993
D.O.T. LABEL(S) REQUIRED	Flammable liquid
PRECAUTIONARY LABEL	Flammable liquid

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
Isopropyl Alcohol 67-63-0		
Oxyalkylated Alcohol		

SECTION III - PHYSICAL DATA

BOILING POINT (°F)	157	SPECIFIC GRAVITY (H_2O=1)	0.9
VAPOR PRESSURE (mm Hg)		PERCENT, VOLATILE BY VOLUME (%)	N/A
DENSITY (lbs/gal) 60°F	7.5	EVAPORATION RATE (_____=1)	N/A
SOLUBILITY IN WATER	emulsifiable, slightly soluble		
APPEARANCE AND ODOR	Clear, colorless liquid; strong		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	155°F (68°C) Seta CC	FLAMMABLE LIMITS Not available	Lel	Uel
EXTINGUISHING MEDIA	Use water spray, alcohol foam, dry chemical or carbon dioxide.			
SPECIAL FIRE FIGHTING PROCEDURES	Use water spray to cool fire exposed surfaces and water spray to disperse the vapors. Full protective clothing and full piece positive pressure self-contained breathing apparatus for fire fighters.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Flammable liquid can release vapors that form flammable mixtures at temperatures at or above the flashpoint. Toxic gases will form upon combustion.			

(Continued on next page)

TRADE NAME: W.I.N. 499684, LT-32

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE Eye Contact: Causes noticeable pain, moderate irritation, and transient cornea injury. Skin Contact: Causes slight irritation; readily absorbs through skin in toxic amounts. Inhalation: Causes respiratory tract irritation, liver & kidney damage, and central nervous system effects. Ingestion: May cause headache, dizziness, nausea, vomiting, liver and kidney injury.

EMERGENCY AND FIRST AID PROCEDURES Eyes: Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention. Skin: Flush with large amounts of water. Use soap if available. Remove grossly contaminated clothing and launder before reuse. Inhalation: Immediately remove affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Seek medical attention. Ingestion: If conscious, give 1 or 2 glasses of water to drink and induce vomiting by sticking finger down throat. Take immediately to hospital. If vomiting cannot be induced, take immediately to hospital.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID	Heat or flame
	STABLE	X		

INCOMPATABILITY (Materials to avoid) Avoid chlorine, flourine, and other strong base oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS Acrid smoke and irritating fumes when heated to decomposition. Products of combustion include carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Eliminate sources of ignition. Prevent additional discharge of material. Prevent liquid from entering sewers, water courses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust. Recover by pumping (use an explosion proof pump or hand pump) or with a suitable absorbent.

WASTE DISPOSAL METHOD Consult an expert on disposal of recovered materials and ensure conformity to local disposal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) NIOSH/OSHA approved respirators may be necessary to prevent overexposure by inhalation.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General) Recommended	OTHER

PROTECTIVE GLOVES Chemical resistant gloves

EYE PROTECTION Chemical goggles

OTHER PROTECTIVE EQUIPMENT Eyewash fountains and safety showers should be easily accessible.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition.

(Continued on next page)

499684

ATTACHMENT TO AND CONTINUATION OF

MATERIAL SAFETY DATA SHEET

Date: February 28, 1991

SECTION I

SUPPLIER'S NAME The Western Company	EMERGENCY TELEPHONE NO. (817) 731-5100
ADDRESS (Number, Street, City, State and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Blend	TRADE NAME AND SYNONYMS LT-32
CHEMICAL FAMILY Nonionic Surfactant	FORMULA Proprietary Blend W.I.N. 499684

SECTION X - LABEL COPY

FOR INDUSTRIAL USE ONLY

FIRST AID:

FOR EYES:	In case of contact, immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.
FOR SKIN:	In case of contact, flush with large amounts of water; use soap if available. Remove grossly contaminated clothing and launder before reuse.
FOR INGESTION:	If swallowed and conscious, give 1 or 2 glasses of water to drink and induce vomiting by sticking finger down throat. Seek medical attention. Do not attempt to induce vomiting or give anything by mouth to an unconscious person.
FOR INHALATION:	If breathed in, immediately remove affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Seek medical attention.
FOR HANDLING:	Employees must wear long sleeves, chemical resistant gloves, and chemical goggles.

ATTENTION!! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Do not cut, puncture, or weld on or near this container. Refer to MSDS and SPM-04-04 for other safety requirements.

100462

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 18DEC85

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code): P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS: Proprietary blend	TRADE NAME AND SYNONYMS: SURFACTANT, Flo Back 10
CHEMICAL FAMILY: ethyoxylated surfactant	FORMULA: W.I.N.100462

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	isopropanol
HAZARD CLASS	Flammable liquid
IDENTIFICATION NUMBER	UN1993
D.O.T. LABEL(S) REQUIRED	Flammable liquid
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
isopropanol	38	400ppm
heavy aromatic petroleum solvent, mostly alkylbenenes except toluene and napthalenes	3-9	100ppm
methylisobutylcarbinol	1	15ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1) @ 15°C	0.934
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	63
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	soluble		
APPEARANCE AND ODOR	alcoholic odor, amber liquid		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
55 F (PMCC)			

EXTINGUISHING MEDIA: Water, foam, dry chemical

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus

UNUSUAL FIRE AND EXPLOSION HAZARDS: Produces toxic fumes when burned

(Continued on reverse side)

TRADE NAME: W.I.N. 100462, SURFACTANT, Flo-Back 10

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
N/A

EFFECTS OF OVEREXPOSURE
Eyes: irritant, toxic if inhaled or ingested.

EMERGENCY AND FIRST AID PROCEDURES
Eyes: flush with water for 15 minutes; seek medical attention. Skin: wash skin with soap and water, wash clothes before wearing. Internal: drink large volumes of water; induce vomiting call physician.

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		
	STABLE	XXX	

INCOMPATABILITY *(Materials to avoid)*
Avoid strong oxidants

HAZARDOUS DECOMPOSITION PRODUCTS
none

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	XXX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Absorb on sand, bury in approved landfill

WASTE DISPOSAL METHOD
Incinerate or bury in land fill

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
none with adequate ventillation

VENTILATION		
	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)* XXX	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
rubber	goggles or face shield

OTHER PROTECTIVE EQUIPMENT
rubber boots and apron

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid contact with body, store away from ignition sources

OTHER PRECAUTIONS

1983 (5-82) R-6 (03/84) **INTER-OFFICE CORRESPONDENCE** 100462

To Bob Slaughter At FW - Accident Prevention

From Robert W. Anderson RWA At FW - Research & Development Center

Date December 18, 1985

RE: Safety Information Update

This is to inform you of revisions, additions, deletions or replacement of products or chemicals and the relevant safety data.

Western Trade Name: Flo Back 10

Chemical Name (if not trade named): blend W.I.N.: 100462

Addition __ Revision X Replacement X Deletion __ to product line

Western Product X Western System __

Cementing __ Stimulation X Used for Warehouse Blending Only __

DOT Proper Shipping Name & I.D. Number (SPM-04-02): Flammable liquid, n.o.s.

DOT Hazardous Material Class: flammable material (UN1993)

Label: flammable liquid

Chemical Storage Class (SPM-04-01): II.1.

Chemical First Aid Guide Class (SPM-04-04):

Eyes * Lungs A Skin G Mouth O

EPA Hazardous Waste Classification: ignitable D001

Material Safety Data Sheet: Attached X Not Available ____

On File at Research X

Replace all previous data with this updated information.

cc: Product Specification File (original)
Legal Services

Attachments: MSDS
Label
Precautionary Statement

"Pursuing excellence in everything I do"

WESTERN
Pacesetters

W.I.N. 100462

FLO BACK 10

WATER CLEANING AGENT

Flash Point: 54°F(12°C) PMCC
Net Content: 389 lb(177 kg)
50 gal(189 L) @ 60°F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 530.0

SPECIFIC USAGE: Use at a concentration of 2 gallons per 1000 gallons in water-based fracturing fluids.

When Handling This Product Employees MUST WEAR: Chemical goggles, rubber apron and boots.

FOR INDUSTRIAL USE ONLY

WARNING

FLAMMABLE. CAUSES EYE INJURY AND SKIN IRRITATION, MAY BE HARMFUL IF INHALED, INGESTED OR ABSORBED THROUGH SKIN.

Do not get in eyes. Avoid contact with skin and clothing. Wear goggles or face shield when handling. Avoid breathing vapor. Use with adequate ventilation. Do not take internally. Keep away from heat and open flames. Keep container closed when not in use.

In case of contact, wash skin with soap and water. for eyes. flush with large amounts of water for at least 15 min. and get medical attention. Remove contaminated clothing and wash before reuse. If inhaled. remove to fresh air. If not breathing, give artificial respiration. preferably mouth to mouth. If breathing is difficult, give oxygen, get medical attention.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

Emergency Telephone: (817)731-5100
(817)731-5433

batch no.

*****D.O.T. PROPER SHIPPING NAME: Flammable liquid, n.o.s., contains isopropanol (UN1993)*****

100193

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 26 SEP 84

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Proprietary blend	TRADE NAME AND SYNONYMS SURFACTANT, LT-5
CHEMICAL FAMILY Surfactant	FORMULA W.I.N. 100193

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	Isopropanol
HAZARD CLASS	Flammable liquid
IDENTIFICATION NUMBER	UN1993
D.O.T. LABEL(S) REQUIRED	Flammable liquid
PRECAUTIONARY LABEL	Attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
Isopropanol	16-18	400 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	163	SPECIFIC GRAVITY (H_2O=1)	0.996
VAPOR PRESSURE (mm Hg.)	IPA & H_2O	PERCENT, VOLATILE BY ~~VOLUME (%)~~ wt. (%)	46.50
VAPOR DENSITY (AIR=1)	IPA & H_2O	EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	soluble		
APPEARANCE AND ODOR	Light yellow to white, clear liquid; mild alcoholic odor		

S.G.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
79°F (PMCC)		Not determined	

EXTINGUISHING MEDIA
Water spray, dry chemical carb on dioxide, alcohol foam

SPECIAL FIRE FIGHTING PROCEDURES
Dilute rapidly with large quantities of water.

UNUSUAL FIRE AND EXPLOSION HAZARDS
No unusual hazards.

(Continued on reverse side)

TRADE NAME: W.I.N. 100193, SURFACTATN, LT-5

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Not determined

EFFECTS OF OVEREXPOSURE
Liquid is irritating to eyes. May be harmful if swallowed or absorbed through skin.

EMERGENCY AND FIRST AID PROCEDURES
Flush eyes for 15 min. and get medical attention. Wash skin thoroughly with soap and water and get medical attention if irritation or redness develops. Launder clothes before reuse. If ingested, vomiting may be induced.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Keep away from heat, sparks, and open flames.
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*
Acidic conditions, quaternary ammonium compounds.

HAZARDOUS DECOMPOSITION PRODUCTS
None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: Keep away from heat, sparks, and open flames.
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Extinguish all sources of ignition. Wash down with water or soak up on sand and dispose of in an approved industrial waste landfill. Do not wash down with water where runoff will contaminate important water sources.

WASTE DISPOSAL METHOD
Incinerate in an incinerator equipped with an afterburner and scrubber or bury in an approved industrial landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
None required in normal use.

VENTILATION	LOCAL EXHAUST: If used at high temperatures	SPECIAL
	MECHANICAL *(General)*: Satisfactory	OTHER

PROTECTIVE GLOVES: Rubber	EYE PROTECTION: Face shield or goggles

OTHER PROTECTIVE EQUIPMENT
Rubber boots and apron, if possibility of contact during use exists.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Store away from heat, sparks, and open flames. Do not use at extremely low or high pH for best product quality.

OTHER PRECAUTIONS
Do not transfer to improperly marked containers. Keep container closed when not in use.

WESTERN

Pacesetters

Western Petroleum Services

W.I.N. 100193

LT-5

SPECIAL WETTING AGENT
DE-EMULSIFIER

Flash Point: 79°F PMCC
Net Content: 457 lb(208 kg)
55 gal(208 L) @ 77°F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 547.OWG

SPECIFIC USAGE:
Use at the rate of 1 to 5 gallons per 1000 gallons of hydrochloric acid, fresh water or brine.

NOTE: LT-5 is anionic.

When Handling This Product Employees MUST WEAR:
Chemical goggles, plastic apron and rubber gloves

FOR INDUSTRIAL USE ONLY

DANGER!

FLAMMABLE LIQUID! Do not use near heat, sparks or open flame.

MAY CAUSE IRRITATION OF THE SKIN AND EYES. Avoid contact with eyes Avoid prolonged or repeated contact with skin. Avoid prolonged inhalation of vapors.

ATTENTION! After this container has been emptied, it may contain flammable and toxic liquid or vapor; observe all warnings and precautions listed for this product. Donot cut, puncture or weld on or near this container.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

Batch no.

100193

100167

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 26 SEP 84

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code): P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS: Proprietary blend	TRADE NAME AND SYNONYMS: SURFACTANT, FS-2
CHEMICAL FAMILY: Surfactant	FORMULA: W.I.N. 100167

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	methanol
HAZARD CLASS	Flammable liquid
IDENTIFICATION NUMBER	UN 1993
D.O.T. LABEL(S) REQUIRED	Flammable liquid
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS

	%	TLV (Units)
methanol: Rat oral LD_{50} 12.88 g/kg, LC_{50} 64,000 ppm 4 hours	30-35	300ppm
isopropanol	0-3	400ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	150°F	SPECIFIC GRAVITY (H_2O=1) @ 60°F	0.960
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	35-40%
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR	Clear to amber, alcoholic odor		

1.0

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
62°F PMCC			

EXTINGUISHING MEDIA
CO_2, dry chemicals, alcohol type foams

SPECIAL FIRE FIGHTING PROCEDURES
Dilution of burning liquid with 22 to 25 volumes of water will effect extinguishment. Wear self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Combustion products may contain hydrofluoric acid and must not be breathed.

(Continued on reverse side)

TRADE NAME: W.I.N. 100167, SURFACTANT, FS-2

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
400 ppm (skin) - ACGIH (1975)

EFFECTS OF OVEREXPOSURE
None expected except for giddiness. Low toxicity. Approxmimately lethal dose = 17,000 mg/kg (rats).

EMERGENCY AND FIRST AID PROCEDURES
Skin: Wash with soap and water. Eyes: Flush with water for at leas& 15 min and call a physician. Inhalation: Move to fresh air. Ingestion: Induce vomiting and call a physician.

SECTION VI - REACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		Excessive heat, sparks and open flames.
	STABLE	XXXX	

INCOMPATABILITY *(Materials to avoid)*
Anhydride, isocyanate, monomer, and organometallic contamination.

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, carbon dioxide, hydrofluoric acid.

HAZARDOUS POLYMERIZATION			CONDITIONS TO AVOID
	MAY OCCUR		
	WILL NOT OCCUR	XXX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate all sources of ignition. Flush small spills to the sewer with water. Large spills should be collected for disposal.

WASTE DISPOSAL METHOD
Dispose of in a sanitary landfill according to local, state and fereral regulations

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Air supplied masks in closed area.

VENTILATION		
	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES	EYE PROTECTION
Rubber	goggles

OTHER PROTECTIVE EQUIPMENT
Eye bath and safety shower

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Keep away from heat, sparks and open flames. Keep container closed

OTHER PRECAUTIONS
Use with adequate ventilation. Do not take internally.

WESTERN
Pacesetters

Western Petroleum Services

W.I.N. 100167

FS-2

Surfactant

Flash Point: 62°F PMCC
Net Content: 429 lb(195 kg)
54 gal(204 L) @ 60°F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 531.0 WG

SPECIFIC USAGE: Use at the rate of 1/2 to 4 gal/1000 gal of treatment fluid.

When Handling This Product Employees MUST WEAR: Rubber gloves, goggles.

FOR INDUSTRIAL USE ONLY

WARNING !

FLAMMABLE LIQUID Keep away from heat, sparks and open flames. Keep container closed when not in use. Use with adequate ventilation. Do not take internally. *FIRST AID:* Skin: wash with soap and water. Eyes: Flush with water for at least 15 minutes and call a physician. Inhalation: Move to fresh air. Ingestion: Induce vomiting and call a physician. *SPILL OR LEAK:* Eliminate all sources of ignition. Flush small spills to the sewer with water. Large spills should be collected for disposal. Dispose of in a sanitary landfill according to local, state and federal regulations. *FIRE FIGHTING:* Dilution of burning liquid with 22 to 25 volumes of water will effect extinguishment. Wear self contained breathing apparatus. Use CO_2, dry chemical or alcohol type foams. Combustion products may contain hydrofluric acid and must not be breathed.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 ; FORT WORTH, TEXAS 76101

Batch no.

.....D.O.T. PROPER SHIPPING NAME: Flammable liquid, n.o.s. ,contains methanol. UN1993*****

100167

WCNA-1063 6/85

R-6 (03/84)

100138

INTER-OFFICE CORRESPONDENCE

To Bob Slaughter At FW - Accident Prevention

From Robert W. Anderson RWA At FW - Research & Development Center

Date December 18, 1985

RE: Safety Information Update

This is to inform you of revisions, additions, deletions or replacement of products or chemicals and the relevant safety data.

Western Trade Name: LT-21

Chemical Name (if not trade named): W.I.N.: 100138

Addition __ Revision X Replacement X Deletion __ to product line

Western Product X Western System __

Cementing __ Stimulation X Used for Warehouse Blending Only __

DOT Proper Shipping Name & I.D. Number (SPM-04-02): Flammable liquid, n.o.s. (UN1993)

DOT Hazardous Material Class: flammable material

Label: flammable liquid

Chemical Storage Class (SPM-04-01): II.1.

Chemical First Aid Guide Class (SPM-04-04):

Eyes * Lungs B Skin G Mouth O

EPA Hazardous Waste Classification: Ignitable D001

Material Safety Data Sheet: Attached X Not Available ___

On File at Research X

cc: Product Specification File (original)
Legal Services

Attachments: MSDS
Label
Precautionary Statement

"A man's judgement is no better than his information"

100138

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

DATE: 14JUN85

SECTION I

Supplier's Name	EMERGENCY TELEPHONE NO.
The Western Company of North America	(817) 731-5100
ADDRESS (Number, Street, City, State, and ZIP Code) P. O. Box 186, Ft. Worth, TX 76101	
CHEMICAL NAME AND SYNONYMS Proprietary blend	TRADE NAME AND SYNONYMS SUSPENDING AGENT, LT-21
CHEMICAL FAMILY ethoxylated fatty compounds	FORMULA W.I.N.100138

SECTION IA HAZARDOUS MATERIAL CLASSIFICATION

D.O.T. PROPER SHIPPING NAME	Flammable liquid, n.o.s.
NAME OF HAZARDOUS COMPONENT	methanol
HAZARD CLASS	Flammable liquid
IDENTIFICATION NUMBER	UN 1993
D.O.T. LABEL(S) REQUIRED	Flammable liquid
PRECAUTIONARY LABEL	attached

SECTION II - HAZARDOUS INGREDIENTS	%	TLV (Units)
methanol UN1230	20	200ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	162°F	SPECIFIC GRAVITY (H_2O=1) @ 60°F	1.06
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	30
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	soluble		
APPEARANCE AND ODOR	Clear amber liquid; odor of varnish		

5.82

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
54°F (PMCC)			

EXTINGUISHING MEDIA
Dry chemical, carbon dioxide, alcohol foam

SPECIAL FIRE FIGHTING PROCEDURES
Addition of water will reduce the intensity of the flame.

UNUSUAL FIRE AND EXPLOSION HAZARDS

(Continued on reverse side)

TRADE NAME: W.I.N.100138,SUSPENDING AGENT, LT-21

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
200 ppm for methanol

EFFECTS OF OVEREXPOSURE
Swallowing the liquid causes inebration, headache, nausea, and vomiting leading to severe illness, blindness or perhaps death.

EMERGENCY AND FIRST AID PROCEDURES
Skin: flush with plenty of water. Eyes: flush with water and get medical attention Inhalation: remove to fresh air and give artificial respiration. If breathing has stopped, call a physician. If swallowed, induce vomiting at once. Then give 2 tablespoons of baking soda in a glass of water. Call a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Sparks, heat and fires.
	STABLE	XXX	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	XXX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate all sources of ignition. Flush spilled material with large volumes of water. Dike large spills and dump to salvage tank.

WASTE DISPOSAL METHOD
Incinerator.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
Self-contained breathing apparatus

VENTILATION	LOCAL EXHAUST: Preferred	SPECIAL
	MECHANICAL *(General)*: Acceptable	OTHER

PROTECTIVE GLOVES: Impervious gloves	EYE PROTECTION: Chemical safety goggles or face shield

OTHER PROTECTIVE EQUIPMENT
Impervious apron and boots; eye bath and safety shower

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
May be fatal or cause blindness if swallowed. Keep away from heat, sparks and fires. Do not leave container open.

OTHER PRECAUTIONS

WESTERN
Pacesetters

W.I.N. 100138

LT-21

SILT SUSPENDING AGENT

Flash Point: 54°F(12°C) PMCC
Net Content: 466 lb(212 kg)
54 gal(204 L) @ 77°F

DIRECTIONS:

For Proper Use, Refer to Service Bulletin No.(s) 85.0, 721.0

SPECIFIC USAGE: Use at a concentration of 1 to 10 gallons per 1000 gallons of acid.

When Handling This Product Employees MUST WEAR: Chemical safety goggles or face shield, impervious gloves, impervious boots and apron.

FOR INDUSTRIAL USE ONLY

WARNING

MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED.
Keep away from heat, sparks and open flames.

FIRST AID: Swallowing the liquid causes inebriation, headache, nausea and vomiting, leading to severe illness, blindness or even death. Skin: flush with plenty of water. Eyes: flush with water and get medical attention. Inhalation: remove to fresh air and give artificial respiration. If breathing has stopped call a physician. If swallowed, induce vomiting at once. Then give 2 tablespoons of baking soda in a glass of water. Call a physician.

SPILL OR LEAK: Eliminate all sources of ignition. Flush spilled material with large volumes of water. Dike large spills and dump to salvage tank. Incinerate.

FIRE FIGHTING: Self-contained breathing apparatus and protective clothing. Dry chemical, carbon dioxide, alcohol foam.

Refer to MSDS and SPM-04-04 for Safety Requirements.

Manufactured for:

The Western Company of North America

P.O. BOX 186 • FORT WORTH, TEXAS 76101

Emergency Telephone: (817)731-5100
(817)731-5433

batch no.

*****D.O.T. PROPER SHIPPING NAME: Flammable liquid, n.o.s., contains methanol (UN1993)*****

CHEMICALS USED AT THE ARTESIA, NEW MEXICO FACILITY
USED BY WESTERN UNICHEM

PRODUCT	TYPE	STORED	CONTAINER	WIN NO.	AVER LB QUANTITY
TECHNI-HIB 798 (scale inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	1,029
TECHNI-HIB 540 (paraffin inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	418
TECHNI-HIB 539 (activator)	L	INSIDE WHSE	STEEL DRUM	N/A	1,444
TECHNI-HIB 538 (paraffin inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	1,668
TECHNI-HIB 375 (corrosion inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	435
TECHNI-CLEAN 420 (surfactant)	L	N. OF YARD	TANK	N/A	1,642
TECHNI-HIB 302 (corrosion inhibitor)	L	N. OF YARD	TANK	N/A	1,524
TECHNI-HIB 324 (corrosion inhibitor)	L	N. OF YARD	TANK	N/A	2,812
TECHNI-HIB 5324 (corrosion inhibitor)	L	N. OF YARD	TANK	N/A	1,480
TECHNI-SOLV 161 (paraffin chemical)	L	N. OF YARD	TANK	N/A	1,298
TECHNI-WET 447 (wetting agent)	L	N. OF YARD	TANK	N/A	1,580
TECHNI-WET 467 (corrosion inhibitor)	L	N. OF YARD	TANK	N/A	1,580
TECHNI-HIB 315 (corrosion inhibitor)	L	N. OF YARD	TANK	N/A	2,812
TECHNI-BREAK 100 (emulsion breaker)	L	INSIDE WHSE	STEEL DRUM	N/A	841
TECHNI-BREAK 110 (demulsifier)	L	INSIDE WHSE	STEEL DRUM	N/A	841
TECHNI-BREAK 5817 (demulsifier)	L	INSIDE WHSE	STEEL DRUM	N/A	820
TECHNI-BREAK 5979 (demulsifier)	L	INSIDE WHSE	STEEL DRUM	N/A	420
TECHNI-BREAK 817 (emulsion breaker)	L	INSIDE WHSE	STEEL DRUM	N/A	2,104
TECHNI-BREAK 978 (demulsifier)	L	INSIDE WHSE	STEEL DRUM	N/A	420
TECHNI-BREAK 974 (emulsion breaker)	L	INSIDE WHSE	STEEL DRUM	N/A	373
TECHNI-BREAK 917 (emulsion breaker)	L	INSIDE WHSE	STEEL DRUM	N/A	840
TECHNI-BREAK 916 (emulsion breaker)	L	INSIDE WHSE	STEEL DRUM	N/A	420
TECHNI-CLEAN 405 (scale remover)	L	INSIDE WHSE	STEEL DRUM	N/A	2,805
TECHNI-CLEAN 420 (surfactant)	L	INSIDE WHSE	STEEL DRUM	N/A	904
TECHNI-CLEAN 436 (acidic cleaning agent)	L	INSIDE WHSE	PLASTIC DRUM	N/A	492
TECHNI-CLEAN 456 (acid/solvent cleaner)	L	INSIDE WHSE	PLASTIC DRUM	N/A	425
TECHNI-CLEAN 470 (surfactant/cleaner)	L	INSIDE WHSE	PLASTIC DRUM	N/A	979
TECHNI-FOAM 558 (foaming agent)	L	INSIDE WHSE	STEEL DRUM	N/A	460
TECHNI-HIB 314 (corrosion inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	419
TECHNI-HIB 366 (corrosion inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	444
TECHNI-HIB 368 (corrosion inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	888
TECHNI-HIB 370 (corrosion inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	1,337
TECHNI-HIB 377 (corrosion inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	1,738
TECHNI-HIB 606 (oxygen scavenger/corr.inhib)	L	INSIDE WHSE	PLASTIC DRUM	N/A	922
TECHNI-HIB 701 (scale/corrosion inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	909
TECHNI-HIB 765 (scale inhibitor)	L	INSIDE WHSE	PLASTIC DRUM	N/A	468
TECHNI-HIB 793 (scale inhibitor)	L	INSIDE WHSE	STEEL DRUM	N/A	2,878
TECHNI-SOLV 158 (paraffin solvent)	L	INSIDE WHSE	STEEL DRUM	N/A	398
TECHNI-SOLV 159 (paraffin solvent)	L	INSIDE WHSE	STEEL DRUM	N/A	410
TECHNI-SOLV 164 (paraffin solvent)	L	INSIDE WHSE	STEEL DRUM	N/A	814
TECHNI-SOLV 175 (paraffin solvent)	L	INSIDE WHSE	STEEL DRUM	N/A	862
TECHNI-SPERSE 253 (paraffin chemical)	L	OUTSIDE DOCK	STEEL DRUM	N/A	439
TECHNI-SOLV 272 (paraffin solvent)	L	INSIDE WHSE	STEEL DRUM	N/A	402
TECHNI-WET 425 (surfactant)	L	OUTSIDE DOCK	PLASTIC DRUM	N/A	884
TECHNI-WET 430 (surfactant)	L	INSIDE WHSE	PLASTIC DRUM	N/A	455
TS-4603 (iron control activator)	L	INSIDE WHSE	PLASTIC DRUM	N/A	550
TS-4800 (iron control)	L	INSIDE WHSE	PLASTIC DRUM	N/A	522
TECHNI-HIB 3051 (corrosion inhibitor)	L	N. OF YARD	TANK	N/A	2,828
TECHNI-BREAK 5916 (emulsion breaker)	L	INSIDE WHSE	STEEL DRUM	N/A	510
KETONE L-2 (corrosion inhibitor)	L	N. OF YARD	TANK	N/A	1,858

Product Name: TECHNI-HIB 798

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/21/93
Date Prepared 11/11/93
Version: 0000003

Product Name: TECHNI-HIB 798

Trade Name: Scale Inhibitor

Chemical Description:
Proprietary blend of neutralized phosphate ester.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 20%
ethylene glycol	00107-21-1	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: < 1 Deg.F.
Boiling Point, 760 mm Hg: appx 200 Deg.F
Specific Gravity(H2O=1) : 1.104 Solubility in water: Soluble
Appearance and Odor: Clear, pale yellow liquid; sweet alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 95 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-HIB 798

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness or swelling.

Skin Contact: May produce skin irritation. Exposure to this material can result in absorption through skin causing health hazard.

Inhalation: overexposure may cause coughing, shortness of breath, dizziness, intoxication and collapse.

Ingestion: when ingested, has caused acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Product Name: TECHNI-HIB 798

Section: 06 REACTIVITY DATA CONTINUED

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated

Product Name: TECHNI-HIB 798

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory

Product Name: TECHNI-HIB 798

Section: 10 REGULATORY INFORMATION CONTINUED

requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 20%
ethylene glycol	00107-21-1	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000
ethylene glycol	00107-21-1	1

OSHA Exposure Limits

Component Name

methanol

TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 325.0 Skin: X

ethylene glycol

Ceiling ppm: 50.0 Ceiling MG/M3 125.0

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Product Name: TECHNI-HIB 798

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 25000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 539

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 11/08/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-HIB 539

Trade Name: Activator

Chemical Description:
Blend of alcohols.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 95%

Section: 03 PHYSICAL DATA

Freezing Point: -144 Deg.F.
Boiling Point, 760 mm Hg: 148 Deg.F
Specific Gravity(H2O=1) : 0.788 Solubility in water: Soluble
Appearance and Odor: Colorless liquid; alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 54 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-HIB 539

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness or swelling.
Skin Irritation: may produce skin irritation.
Skin Absorption: exposure to this material can result in absorption through skin causing health hazard.
Inhalation: overexposure may cause coughing, shortness of breath, dizziness, intoxication and collapse.
Ingestion: has caused acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Product Name: TECHNI-HIB 539

Section: 06 REACTIVITY DATA CONTINUED

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated

Product Name: TECHNI-HIB 539

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory

Product Name: TECHNI-HIB 539

Section: 10 REGULATORY INFORMATION CONTINUED

requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 95%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name
methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: x

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Methanol solution

Product Name: TECHNI-HIB 539

Section: 10 REGULATORY INFORMATION CONTINUED

Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: methanol
Hazardous Substance RQ: 5300# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 540

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 5/25/93
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-HIB 540

Trade Name: Paraffin Inhibitor

Chemical Description:
Proprietary blend of polymers and dispersants

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
xylene	01330-20-7	< 70%
ethyl benzene	00100-41-4	< 25%
isopropyl alcohol	00067-63-0	< 15%
2-butoxyethanol	00111-76-2	< 15%
toluene	00108-88-3	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 30 Deg.F.
Boiling Point, 760 mm Hg: 220 Deg.F
Specific Gravity(H2O=1) : 0.880 Solubility in water: Insoluble
Appearance and Odor: Clear, amber liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 66 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that

Product Name: TECHNI-HIB 540

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: irritating and produces intense stinging, redness, tearing, blurred vision, and burning. If not promptly removed, may cause eye damage.

Skin Contact: brief contact may cause irritation. Prolonged contact, as from clothing wet with the chemical, may cause more severe irritation. Repeated or prolonged contact with the skin may cause irritation, defatting and drying of the skin which may result in dermatitis.

Skin absorption: penetrates skin readily. Frequent or widespread contact may result in the absorption of potentially harmful amounts, with possible injury to kidneys, liver, blood and/or bone marrow.

Inhalation: vapors may cause mild irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, vomiting, dizziness, weakness, fatigue, apathy, loss of appetite, dermal effects and mild narcosis. Inhalation of very high concentrations or prolonged exposure may cause unconsciousness, coma or death.

Ingestion: will cause burning of the gastrointestinal tract, headache, nausea, diarrhea, weakness, bleeding, CNS depression, hemolysis, and pulmonary damage. Swallowing the liquid may result in vomiting. If vomiting occurs spontaneously, do not allow vomitus to be breathed into the lungs as even a small quantity in the lungs may result in chemical pneumonitis and pulmonary edema/hemorrhage. Can be fatal.

Chronic Overexposure: repeated overexposure may result in damage to the blood or neural dysfunction.

Medical Conditions Generally Aggravated by Exposure: pre-existing eye, skin and respiratory disorders.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical

Product Name: TECHNI-HIB 540

Section: 05 HEALTH HAZARD DATA CONTINUED

attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.

Product Name: TECHNI-HIB 540

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Product Name: TECHNI-HIB 540

Section: 09 SPECIAL PRECAUTIONS CONTINUED

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	01330-20-7	< 70%

Product Name: TECHNI-HIB 540

Section: 10 REGULATORY INFORMATION CONTINUED

ethyl benzene	00100-41-4	< 25%
2-butoxyethanol	00111-76-2	< 15%
toluene	00108-88-3	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000
ethyl benzene	00100-41-4	1000
toluene	00108-88-3	1000

OSHA Exposure Limits

Component Name

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

2-butoxyethanol
TWA ppm: 25.0 TWA MG/M3: 120.0 Skin: X

toluene
TWA ppm: 100.0 TWA MG/M3: 375.0 STEL ppm: 150.0 STEL MG/M3: 560.0
Ceiling ppm: 300.0

National Fire Protection Agency

2 Health	3 Fire
0 Reactive	____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: xylene, ethyl benzene, toluene, isopropyl alcohol
Hazardous Substance RQ: 1300# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

Product Name: TECHNI-HIB 540

Section: 10 REGULATORY INFORMATION CONTINUED

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 538

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 11/08/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-HIB 538

Trade Name: Paraffin Inhibitor

Chemical Description:
Proprietary blend of polyethylene co-polymers.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
xylene	01330-20-7	< 95%
vinyl acetate ethylene copolymer	24937-78-8	< 15%

Section: 03 PHYSICAL DATA

Freezing Point: 20 Deg.F.
Specific Gravity(H2O=1) : 0.910 Solubility in water: Insoluble
Appearance and Odor: Clear, amber liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 104 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is combustible and under certain conditions may release vapors that pose a severe fire hazard. These vapors may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static

Product Name: TECHNI-HIB 538

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

discharge, or other ignition sources at locations distant from material handling point. Containers may explode from internal pressure if confined to a fire. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: can cause severe irritation, redness, tearing, and blurred vision.

Skin Contact: prolonged or repeated contact can cause moderate irritation, defatting, and dermatitis. Can absorb natural skin oils and cause dermatitis.

Inhalation: excessive inhalation of vapors can cause nasal and respiratory irritation and central nervous system effects including dizziness, weakness, fatigue, nausea, vomiting, headache, possible unconsciousness, coma and even death.

Ingestion: can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Swallowing the liquid may result in vomiting. If vomiting occurs spontaneously, do not allow vomitus to be breathed into the lungs as even a small quantity in the lungs may result in chemical pneumonitis and pulmonary edema/hemorrhage. Can be fatal.

Chronic Effects of Exposure: prolonged or repeated exposure to high concentrations may cause neural dysfunction.

Medical Conditions Generally Aggravated by Exposure: pre-existing eye, skin and respiratory disorders.

Warning! Contains volatiles such as vinyl acetate monomer which may build up in the headspace and which may cause irritation and may be flammable. High exposures of vinyl acetate monomer resulted in respiratory tract tumors in some laboratory animals.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

Product Name: TECHNI-HIB 538

Section: 05 HEALTH HAZARD DATA CONTINUED

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component

Product Name: TECHNI-HIB 538

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-HIB 538

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	01330-20-7	< 95%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000

OSHA Exposure Limits

Component Name
xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

Product Name: TECHNI-HIB 538

Section: 10 REGULATORY INFORMATION CONTINUED

National Fire Protection Agency

2 Health	2 Fire
0 Reactive	____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene
Hazardous Substance RQ: 1100# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 375

Section: 01 PRODUCT IDENTIFICATION

WESTERN UNICHEM
P.O. BOX 1499
707 N. LEECH
HOBBS, TX 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/21/93
Date Prepared 10/23/94
Version: 0000003

Product Name: TECHNI-HIB 375

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary blend of neutralized amines in solvent

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
isopropyl alcohol	000067-63-0	< 20%
xylene	001330-20-7	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: 1 Deg.F. pH: 2.8 - 3.4
Boiling Point, 760 mm Hg: approx. 200 Deg.F
Specific Gravity(H2O=1) : 0.982 Solubility in water: Complete
Appearance and Odor: Clear, amber liquid; alcoholic amine odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 74 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-HIB 375

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning, redness, tearing and blurred vision. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation, defatting and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose and throat. Prolonged or excessive exposures may cause dizziness, weakness, fatigue, nausea, headache and unconsciousness.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, diarrhea, bleeding, CNS depression, hemolysis and pulmonary damage. Can be fatal. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-HIB 375

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

Product Name: TECHNI-HIB 375

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311

Product Name: TECHNI-HIB 375

Section: 10 REGULATORY INFORMATION CONTINUED

and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	001330-20-7	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	001330-20-7	1000

OSHA Exposure Limits

Component Name

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Product Name: TECHNI-HIB 375

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, isopropyl alcohol
Hazardous Substance RQ: 20000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product, or components if product is a mixture, is/are listed on the Toxic Substance Control Act (TSCA) inventory.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While WESTERN UNICHEM believes that the above data is correct, WESTERN UNICHEM expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-CLEAN 420

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 4/15/92
Date Prepared 9/21/93
Version: 0000003

Product Name: TECHNI-CLEAN 420

Trade Name: Surfactant

Chemical Description:
Proprietary blend of water soluble surfactants

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 25%

Section: 03 PHYSICAL DATA

Freezing Point: - 1 Deg.F.
Specific Gravity(H2O=1) : 0.990 Solubility in water: Soluble
Appearance and Odor: Amber liquid; alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 107 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is combustible and under certain conditions may release vapors that pose a severe fire hazard. These vapors may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant

Product Name: TECHNI-CLEAN 420

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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from material handling point. Containers may explode from internal pressure if confined to a fire. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness or swelling. May cause permanent eye injury, even blindness.

Skin Contact: prolonged or repeated exposure may cause skin irritation, redness, edema or drying of the skin.

Skin Absorption: exposure to this material can result in absorption through skin causing health hazard.

Inhalation: mists may cause irritation to upper respiratory tract. Overexposure may cause coughing, chest discomfort, shortness of breath, dizziness, intoxication and collapse. Excessive exposure may cause liver, kidney effects.

Ingestion: has caused acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death. May cause lethargy, nausea, vomiting, and diarrhea.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-CLEAN 420

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-CLEAN 420

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-CLEAN 420

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 25%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name
methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
2 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.

Product Name: TECHNI-CLEAN 420

Section: 10 REGULATORY INFORMATION CONTINUED

Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 20000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

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END OF MSDS

UNICHEM INTERNATIONAL

MATERIAL SAFETY DATA SHEET

"Essentially Similar" to Form OSHA-20

Date Prepared March 24, 1987

Supersedes Previous Sheet Dated New

I PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL 707 N. Leech / P. O. Box 1499 / Hobbs, New Mexico 88240	EMERGENCY TELEPHONE NO. (505) 393-7751

PRODUCT NAME TECHNI-HIB 3022 TRADE NAME: CORROSION INHIBITOR

CHEMICAL DESCRIPTION: Proprietary blend of imidazoline in aromatic solvent

II HAZARDOUS INGREDIENTS

MATERIAL		TLV (UNITS)
Contains Aromatic Solvent		8 hr. TWA 100 ppm recommended

III PHYSICAL DATA

BOILING POINT, 760 mm Hg	N/D	FREEZING POINT:	-40°F
SPECIFIC GRAVITY (H_2O=1)	.91	VAPOR PRESSURE @	N/D
VAPOR DENSITY (AIR=1)	N/D	SOLUBILITY IN WATER	Dispersible
PERCENT VOLATILES BY WEIGHT	N/D	EVAPORATION RATE	N/D

APPEARANCE AND ODOR Dark Amber Liquid, Pungent Odor

IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD) 108°F (TCC)

FLAMMABLE LIMITS IN AIR, % BY VOLUME	LOWER	N/D	UPPER	N/D

EXTINGUISHING MEDIA: Foam, dry chemical, CO_2, water spray or fog. Use a water spray to cool fire-exposed containers.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing equipment for enclosed areas in a fire situation.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors can flow along surfaces to distant ignition sources and flash back.

Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.

*N/D - Not Determined

*N/D-Not Determined

V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	TLV 100ppm (estimated--not established by ACGIH or OSHA)
EFFECTS OF OVEREXPOSURE	Inhalation of high vapor, concentrations may have results rangi from mild depression to convulsions and loss of consciousness. Concentrations over 100ppm may cause dizziness, nausea, and headache. Prolonged or repeated skin contact is irritating and cause defatting and dermatitus. Eye contact may cause burning ar irritation. Aspiration can be a hazard if material is swallowed.
EMERGENCY AND FIRST AID PROCEDURES	SKIN: Remove contaminated clothing; wash with soap and water. EYES: Flush eyes with lots of running water. INHALATION: Remove fresh air. Restore breathing if necessary. Call a physician. INGESTION: Do not induce vomiting. Give white mineral oil or ed oil. Call a physician.

VI REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	
UNSTABLE	STABLE		
	XXXXXX		NONE

INCOMPATIBILITY (MATERIALS TO AVOID)	Avoid oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	Toxic fumes and gases including oxides and carbon and nitrogen.

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	
MAY OCCUR	WILL NOT OCCUR		
	XXXXXXXX		NONE

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Remove all sources of ingintion. Provide adequate ventilation. Conta and recover free liquid. Use vermiculite, sand, etc. to abosrb resid or small spill. Scrape up and place in covered metal container. Prevent liquid from entering sewer or water course.
WASTE DISPOSAL METHOD	Dispose of by incineration or by depositing in an approved landfill under controlled conditions. Follow all Federal, State, and local regulations.

VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)	Use respirators with organic solvent type canisters for short periods of nonroutine work at 100-2000ppm. Use self-contained breathing apparatus for higher or unknown vapor concentrations.

VENTILATION	LOCAL EXHAUST	As needed to meet TLV requirements	SPECIAL	100 lfm face velocity for exhaust hoods.
	MECHANICAL (GENERAL)	As needed to meet TLV requirements	OTHER	
PROTECTIVE GLOVES		Buna-N rubber gloves and apron to prevent contact.	EYE PROTECTION	Safety glasses or goggles and/or face shield.

OTHER PROTECTIVE EQUIPMENT	Eye wash stations should be readily accessible.

IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store containers in clean, cool, well-ventilated, low fire-risk area away from oxidizing agents and ignition sources. Ground and electrically interconnect metal containers when dispensing. Use safety cans for small amou
OTHER PRECAUTIONS	

Product Name: TECHNI-HIB 324

Section: 01 PRODUCT IDENTIFICATION

WESTERN UNICHEM
P.O. BOX 1499
707 N. LEECH
HOBBS, TX 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/21/93
Date Prepared 12/20/94
Version: 0000005

Product Name: TECHNI-HIB 324

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary blend of organic amines and acids in aromatic solvent

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	064742-91-2	< 40%
kerosene	008008-20-6	< 35%
4,7-methano-1H-indene, octahydro	006004-38-2	< 20%
isopropyl alcohol	000067-63-0	< 10%
xylene	001330-20-7	< 10%
ethyl benzene	000100-41-4	< 10%
2,3-dihydro-1H-indene	000496-11-7	< 10%
naphthalene	000091-20-3	< 5%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	062337-89-7	< 5%
heavy aromatic naphtha	064741-68-0	< 5%
n-propyl benzene	000103-65-1	< 5%
ethyl toluene	025550-14-5	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F. pH: N/A
Boiling Point, 760 mm Hg: > 300 Deg.F
Specific Gravity(H2O=1) : 0.890 Solubility in water: Insoluble
Appearance and Odor: Clear amber liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 76 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the

Product Name: TECHNI-HIB 324

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces redness, tearing and intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation, dry the skin and may cause dermatitis. Components of this product may be slightly toxic to internal organs if absorbed through the skin. The degree of injury will depend on the amount absorbed.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause coughing, nausea, headache, dizziness, drowsiness, mental confusion, insomnia, vomiting, blurred vision, flushing of face, slurred speech, difficulty in swallowing, weakness, pain in limbs, tremors, psychosis and exaggerated tendon reflexes. The vapors are anesthetic, may cause unconsciousness, respiratory arrest, irregular heartbeat, coma, convulsions and may have other central nervous system effects including death.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis and pulmonary damage. If swallowed, this material can directly enter the lungs. This can occur during the act of swallowing or when vomiting the substance. Once in the lungs the substance is very difficult to remove and can cause severe injury to the lungs and result in death.

Medical Conditions Aggravated By Exposure: may aggravate existing eye, skin, lung, kidney, liver conditions. Individuals with congenital erythrocyte glucose-6-phosphate dehydrogenase deficiency may be particularly susceptible to the hemolytic effects of naphthalene.

Product Name: TECHNI-HIB 324

Section: 05 HEALTH HAZARD DATA CONTINUED

Additional Information: this product contains kerosene. Kerosene may cause possible cancer, pulmonary edema, bronchial pneumonia, asphyxiation, liver and kidney damage, anemia or myocardial. Kerosene is not listed by NTP or IARC as a carcinogen. Repeated application of heavy aromatic distillate to the skin of rats resulted in severe skin irritation at the site of contact which resulted in cracking, peeling and scarring. Inhalation exposure caused decreased body weights and death of one female but no observable gross pathological effects in surviving animals. This product contains xylene, a chemical that has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. These effects included delayed development and minor skeletal variations. Additionally, when pregnant mice were exposed by ingestion to a leval that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Malformations have not been reported following inhalation exposure. Because of the very high levels of exposure used in these studies, we do not believe that their results imply an increased risk of reproductive toxicity to workers exposed to xylene levels at or below the exposure standard. Mixed xylenes have been shown to cause hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loss at low concentrations. This material contains cumene. Rats exposed to high concentrations had increases in weights of liver, kidneys and adrenals, and microscopic changes in the kidneys. This product contains naphthalene. Overexposure to naphthalene by inhalation, ingestion or skin contact may produce signs and symptoms of headache, fever, profuse sweating, nausea, abdominal pain, diarrhea, lethargy, tremors, convulsions, evidence of blood changes, including hematuria and hemoglobinuria, and optic neuritis. Lab animals given repeated oral doses on naphthalene have developed cataracts. It has been reported that continued exposure to naphthalene in humans at concentrations above 15 ppm may result in optical neuritis, corneal injuries as well as lens opacities. Overexposure to high concentrations of vapors may cause liver and kidney damage.

Components of this product results from a reaction ethylene oxide (EtO) and propylene oxide (PO). Therefore, it may contain residual amounts (less than 0.1%) of unreacted EtO or PO. EtO and PO can accumulate in the container headspace and can be released to the ambient environment when opened. This release of EtO or PO would tend to increase when the product is agitated during

Product Name: TECHNI-HIB 324

Section: 05 HEALTH HAZARD DATA CONTINUED

unloading and blending operations. OSHA has set the worker exposure levels for EtO at 1ppm and 20ppm for PO (8-hour time weighted average. The International Agency for Research on Cancer (IARC) has rated EtO and PO as "Probable Human Carcinogen (group 2A). The National Toxicological Program (NTP) has rated these substances as "Anticipated Carcinogens". Reasonable precautions should be taken to reduce worker exposure to the lowest feasible level. EtO and PO are chemicals known to the State of California to cause cancer. EtO is a chemical known to the State of California to cause reproductive toxicity. EtO and PO are regulated in California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke,

Product Name: TECHNI-HIB 324

Section: 06 REACTIVITY DATA CONTINUED

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carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Product Name: TECHNI-HIB 324

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

Product Name: TECHNI-HIB 324

Section: 10 REGULATORY INFORMATION CONTINUED

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard — Sudden Release of Pressure — X Fire
X Chronic Health Hazard — Reactive

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	001330-20-7	< 10%
ethyl benzene	000100-41-4	< 10%
naphthalene	000091-20-3	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	001330-20-7	1000
ethyl benzene	000100-41-4	1000
naphthalene	000091-20-3	100

OSHA Exposure Limits

Component Name

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

National Fire Protection Agency

2 Health — 3 Fire
0 Reactive — ____ Other

Product Name: TECHNI-HIB 324

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, ethyl benzene, naphthalene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product, or components if product is a mixture, is/are listed on the Toxic Substance Control Act (TSCA) inventory.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While WESTERN UNICHEM believes that the above data is correct, WESTERN UNICHEM expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 5324

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 2/15/93
Date Prepared 9/21/93
Version: 0000005

Product Name: TECHNI-HIB 5324

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary blend of organic amines and acids in aromatic solvent

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 70%
4,7-methano-1H-indene, octahydro	06004-38-2	< 30%
kerosene	08008-20-6	< 20%
ethyl benzene	00100-41-4	< 10%
2-methylstyrene	00611-15-4	< 10%
isopropyl alcohol	00067-63-0	< 10%
ethyl toluene	25550-14-5	< 10%
xylene	01330-20-7	< 5%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
n-propyl benzene	00103-65-1	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%
1,2,3,4-tetrahydronaphthalene (tetralin)	00119-64-2	< 5%
2-ethyl-bicyclo-(2,2,1)-heptane	02146-41-0	< 5%
bicycloheptane, 2-butylidene	62211-86-3	< 5%
heavy aromatic naphtha	64741-68-0	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: > 300 Deg.F
Specific Gravity(H2O=1) : 0.920 Solubility in water: Insoluble
Appearance and Odor: Clear amber liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 78 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Product Name: TECHNI-HIB 5324

Section: 05 HEALTH HAZARD DATA CONTINUED

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent mater-

Product Name: TECHNI-HIB 5324

Section: 09 SPECIAL PRECAUTIONS CONTINUED

vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986

Product Name: TECHNI-HIB 5324

Section: 10 REGULATORY INFORMATION CONTINUED

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compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

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While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-SOLV 161

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 12/13/90
Date Prepared 9/21/93
Version: 0000003

Product Name: TECHNI-SOLV 161

Trade Name: Paraffin chemical

Chemical Description:
Proprietary blend of aromatic and aliphatic solvents and dispersants.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
octane	00111-65-9	< 45%
heptane	00142-82-5	< 40%
toluene	00108-88-3	< 20%
naphthalene	00091-20-3	< 10%
cyclohexane	00110-82-7	< 5%
isopropyl alcohol	00067-63-0	< 5%
diisobutyl ketone	00108-83-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.737 Solubility in water: Insoluble
Appearance and Odor: Clear amber liquid, solvent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 24 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is

Product Name: TECHNI-SOLV 161

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye contact: can cause severe irritation, stinging, redness, tearing, blurred vision, swelling, conjunctiva irritation, burning, and may cause eye damage.

Skin contact & absorption: can cause irritation, defatting, and dermatitis. Prolonged or repeated contact may cause redness, burning, and drying and cracking of the skin. Contact may result in skin absorption. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

Ingestion: can cause throat and stomach burning sensation, gastrointestinal irritation, nausea, vomiting, diarrhea, bleeding, CNS depression, hemolysis, and pulmonary damage. Can be fatal. This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Inhalation: excessive inhalation of vapors can cause nasal and respiratory irritation, central nervous system effects including dizziness, loss of coordination, drowsiness, mild narcosis, weakness, fatigue, nausea, headache, possible unconsciousness, and even death. Respiratory symptoms associated with pre-existing lung disorders (e.g., asthma-like conditions) may be aggravated by exposure to this material.

Signs and symptoms of chronic exposure are similar to those of acute exposure.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

Product Name: TECHNI-SOLV 161

Section: 05 HEALTH HAZARD DATA CONTINUED

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in

Product Name: TECHNI-SOLV 161

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving

Product Name: TECHNI-SOLV 161

Section: 09 SPECIAL PRECAUTIONS CONTINUED

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container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard _ Sudden Release of Pressure X Fire
X Chronic Health Hazard _ Reactive

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
toluene	00108-88-3	< 20%
naphthalene	00091-20-3	< 10%
cyclohexane	00110-82-7	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable.

Product Name: TECHNI-SOLV 161

Section: 10 REGULATORY INFORMATION CONTINUED

(These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
toluene	00108-88-3	1000
naphthalene	00091-20-3	100
cyclohexane	00110-82-7	1000

OSHA Exposure Limits

Component Name

octane
TWA ppm: 300.0 TWA MG/M3: 1450.0 STEL ppm: 375.0 STEL MG/M3: 1800.0

heptane
TWA ppm: 400.0 TWA MG/M3: 1600.0 STEL ppm: 500.0 STEL MG/M3: 2000.0

toluene
TWA ppm: 200.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

diisobutyl ketone
TWA ppm: 25.0 TWA MG/M3: 150.0

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, toluene, cyclohexane
Hazardous Substance RQ: 1000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-WET 447W

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 11/19/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-WET 447W

Trade Name: Wetting Agent

Chemical Description:
Proprietary quaternary ammonium chloride compound in water

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 50%
alkyl dimethyl benzyl ammonium chloride	00139-07-1	< 20%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.890 Solubility in water: Complete
Appearance and Odor: Clear, amber liquid; alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 60 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling

Product Name: TECHNI-WET 447W

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness or swelling.

Skin Irritation: may produce skin irritation. Exposure to this material can result in absorption through skin causing health hazard.

Inhalation: overexposure may cause coughing, shortness of breath, dizziness, intoxication, collapse, optic complications, unconsciousness, cardiac depression, and death.

Ingestion: has caused nausea, acidosis, narcosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Product Name: TECHNI-WET 447W

Section: 06 REACTIVITY DATA CONTINUED

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated

Product Name: TECHNI-WET 447W

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory

Product Name: TECHNI-WET 447W

Section: 10 REGULATORY INFORMATION CONTINUED

requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 50%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name
methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: x

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.

Product Name: TECHNI-WET 447W

Section: 10 REGULATORY INFORMATION CONTINUED

Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

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END OF MSDS

MATERIAL SAFETY DATA SHEET

"Essentially Similar" to Form OSHA-20

UNICHEM INTERNATIONAL

Date Prepared 12/09/87

Supersedes Previous Sheet Dated NEW

I PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL 707 N. Leech / P. O. Box 1499 / Hobbs, New Mexico 88240	EMERGENCY TELEPHONE NO. (505) 393-7751

PRODUCT NAME TECHNI-WET 467 TRADE NAME: Corrosion Inhibitor

CHEMICAL DESCRIPTION:

Alkyl, dimethyl, benzyl ammonium chloride.

II HAZARDOUS INGREDIENTS

MATERIAL		TLV (UNITS)
Contains Methanol		8 hr. TWA 200 ppm (Skin) or 260 mg/m3

III PHYSICAL DATA

BOILING POINT, 760 mm Hg	N/D	FREEZING POINT:	+ 10°F
SPECIFIC GRAVITY (H_2O=1)	.98	VAPOR PRESSURE @	N/D
VAPOR DENSITY (AIR=1)	N/D	SOLUBILITY IN WATER	Soluble
PERCENT VOLATILES BY WEIGHT	N/D	EVAPORATION RATE	N/D

APPEARANCE AND ODOR Clear yellow liquid, alcohol odor.

IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD) 140°F (TCC)

FLAMMABLE LIMITS IN AIR, % BY VOLUME for Methanol	LOWER	6.0	UPPER	36.5

EXTINGUISHING MEDIA CO_2, dry chemical, alcohol foam, and water mist or fog. Use a blanketing effect to smother fire.

SPECIAL FIRE FIGHTING PROCEDURES Fire fighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS Moderate to low explosion hazard and dangerous fire hazard when exposed to heat, sparks, or flames and can react vigouously with oxidizing agents.

Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.

N/D - Not Determined

V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	200 ppm (Skin) or 260 mg/m^3 for Methanol
EFFECTS OF OVEREXPOSURE	Symptoms of overexposure include dizziness, visual impairment, nausea, respiratory failure, muscular incoordination and narcosis. Prolonged or repeated skin contact will cause dermatitis, erythema, and scaling. Ingestion could cause blindness or death.
EMERGENCY AND FIRST AID PROCEDURES	SKIN: Remove contaminated clothing. Wash affected areas with soap and water. EYES: Irrigate with running water for 15 min. Get medical help. INHALATION: Remove to fresh air and restore or support breathing if necessary. INGESTION: Drink Milk, water or sodium bicarbonate solution. Induce vomiting if victim is conscious.

VI REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	
UNSTABLE	STABLE		NONE
	XXXXXXX		

INCOMPATIBILITY (MATERIALS TO AVOID)	Avoid strong oxidizing agents such as nitrates, perchlorates, or sulfuric acid.
HAZARDOUS DECOMPOSITION PRODUCTS	Oxides of carbon and nitrogen

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	
MAY OCCUR	WILL NOT OCCUR		NONE
	XXXXXXX		

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Remove all sources of ignition, provide adequate ventilation. Absorb on vermiculite, paper or other absorbent. Burn in an approved incinerator. Spills may be diluted and flushed to ground with water spray. Do not flush to sewer.
WASTE DISPOSAL METHOD	Dispose via a licensed waste disposal company. Follow Federal, State and local regulations.

VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)	Air supplied or self-contained breathing apparatus above TLV and below 2000 ppm. A full face piece is required above 10,000 ppm.

VENTILATION	LOCAL EXHAUST	Exhaust ventilation with 100cfm where vapor exposure	SPECIAL	Engineering controls shoul be sparkproof and explosio proo
	MECHANICAL (GENERAL)	As need to meet TLV requirements.	is likely. OTHER	
PROTECTIVE GLOVES		Rubber gloves	EYE PROTECTION	Safety glasses or gogg and/or face shield whe splash is possible.

OTHER PROTECTIVE EQUIPMENT	Eye wash stations and safety showers should be available in areas of use.

IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	No smoking in areas of use. Store in well ventilated, low fire-risk area Away from sources of heat, open flame and ignition. Ground and electrically interconnect containers for transfer.
OTHER PRECAUTIONS	Avoid prolonged or repeated breathing of vapors or contact with skin. Do not ingest.

Product Name: TECHNI-HIB 315

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 12/09/91
Date Prepared 9/21/93
Version: 0000004

Product Name: TECHNI-HIB 315

Trade Name: Corrosion inhibitor

Chemical Description:
Proprietary blend of organic amines and acids in aromatic solvent

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 40%
kerosene	08008-20-6	< 40%
4,7-methano-1H-indene, octahydro	06004-38-2	< 20%
ethyl benzene	00100-41-4	< 10%
2-methylstyrene	00611-15-4	< 10%
isopropyl alcohol	00067-63-0	< 10%
ethyl toluene	25550-14-5	< 5%
naphthalene	00091-20-3	< 5%
aromatic hydrocarbon solvent	64741-68-0	< 5%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
xylene	01330-20-7	< 5%
n-propyl benzene	00103-65-1	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: > 300 Deg.F
Specific Gravity(H2O=1) : 0.880 Solubility in water: Insoluble
Appearance and Odor: Clear liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 70 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the

Product Name: TECHNI-HIB 315

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning, redness, tearing, and blurred vision. If not promptly removed, may cause eye damage.

Skin Contact: moderate irritation including pain or a feeling of heat, discoloration, swelling and blistering. Repeated or prolonged contact with the skin may cause dermatitis.

Inhalation: vapors may cause mild irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache and mild narcosis. High vapor concentrations are anesthetic and may cause headaches, dizziness, drowsiness, coughing, mental confusion, lightheadedness, loss of coordination, insomnia, vomiting, blurred vision, flushing of face, slurred speech, difficulty in swallowing, loss of appetite, fatigue, weakness, pain in limbs, psychosis, tremors, exaggerated tendon reflexes, irregular heartbeat, unconsciousness, respiratory arrest, convulsions, coma, and death. Inhalation or aspiration into the lungs may result in lipoid pneumonitis. Chronic exposure may cause liver and kidney damage or anemia.

Ingestion: will cause burning of the gastrointestinal tract, nausea, vomiting, diarrhea, bleeding, CNS depression, hemolysis, and pulmonary damage. If aspirated into the lungs, can cause severe injury to the lungs and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and

Product Name: TECHNI-HIB 315

Section: 05 HEALTH HAZARD DATA CONTINUED

launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill

Product Name: TECHNI-HIB 315

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

absorbents into DOT approved containers. Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Product Name: TECHNI-HIB 315

Section: 09 SPECIAL PRECAUTIONS CONTINUED

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range

Product Name: TECHNI-HIB 315

Section: 10 REGULATORY INFORMATION CONTINUED

ethyl benzene	00100-41-4	< 10%
naphthalene	00091-20-3	< 5%
xylene	01330-20-7	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
ethyl benzene	00100-41-4	1000
naphthalene	00091-20-3	100
xylene	01330-20-7	1000

OSHA Exposure Limits

Component Name

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, ethyl benzene, xylene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability

Product Name: TECHNI-HIB 315

Section: 10 REGULATORY INFORMATION CONTINUED

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for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-BREAK 100

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 3/02/92
Date Prepared 9/21/93
Version: 0000003

Product Name: TECHNI-BREAK 100

Trade Name: Emulsion breaker

Chemical Description:
Proprietary blend of nonionic and anionic surfactants in aromatic solvent

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 60%
4,7-methano-1H-indene, octahydro	06004-38-2	< 30%
isopropyl alcohol	00067-63-0	< 20%
ethyl benzene	00100-41-4	< 10%
2-methylstyrene	00611-15-4	< 10%
aromatic hydrocarbon solvent	64742-94-5	< 10%
ethyl toluene	25550-14-5	< 10%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
n-propyl benzene	00103-65-1	< 5%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%
1,2,3,4-tetrahydronaphthalene (tetralin)	00119-64-2	< 5%
2-ethyl-bicyclo-(2,2,1)-heptane	02146-41-0	< 5%
bicycloheptane, 2-butylidene	62211-86-3	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: appx 300 Deg.F
Specific Gravity(H2O=1) : 0.928 Solubility in water: Insoluble
Appearance and Odor: Clear, amber liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 66 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal

Product Name: TECHNI-BREAK 100

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: can cause moderate irritation including pain or a feeling of heat, discoloration, swelling and blistering. Repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, mild narcosis, dizziness, lightheadedness, loss of appetite, weakness and loss of coordination. Can cause pulmonary edema and bronchial emphysema.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. If aspirated into the lungs, can cause severe injury to the lungs and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

Product Name: TECHNI-BREAK 100

Section: 05 HEALTH HAZARD DATA CONTINUED

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in

Product Name: TECHNI-BREAK 100

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or

Product Name: TECHNI-BREAK 100

Section: 09 SPECIAL PRECAUTIONS CONTINUED

other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
ethyl benzene	00100-41-4	< 10%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the

Product Name: TECHNI-BREAK 100

Section: 10 REGULATORY INFORMATION CONTINUED

National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
ethyl benzene	00100-41-4	1000
xylene	01330-20-7	1000
naphthalene	00091-20-3	100
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, ethyl benzene, xylene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-BREAK 110

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 5/22/87
Date Prepared 10/21/93
Version: 0000002

Product Name: TECHNI-BREAK 110

Trade Name: Demulsifier

Chemical Description:
Proprietary blend of nonionic surfactants

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic naphtha	64741-68-0	< 65%
isopropyl alcohol	00067-63-0	< 20%
trimethyl benzenes	25551-13-7	< 20%
xylene	01330-20-7	< 10%
cumene	00098-82-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.890 Solubility in water: Dispersible
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 69 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and

Product Name: TECHNI-BREAK 110

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose and throat. Prolonged exposures may cause nausea, headache, dizziness, drowsiness, depression, lack of appetite, vomiting, numbness, tremors, impaired memory, unconsciousness, coma and death. Moderate liver enlargement, kidney enlargement and even death is possible if exposure is not controlled.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis and pulmonary damage. Ingestion of this material could in aspiration into the lungs of the more volatile components which in turn could lead to life-threatening chemical pneumonitis. Can be fatal.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or

Product Name: TECHNI-BREAK 110

Section: 05 HEALTH HAZARD DATA CONTINUED

poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator

Product Name: TECHNI-BREAK 110

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-BREAK 110

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	01330-20-7	< 10%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

Product Name: TECHNI-BREAK 110

Section: 10 REGULATORY INFORMATION CONTINUED

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0
trimethyl benzenes
TWA ppm: 25.0 TWA MG/M3: 125.0
xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0
cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: xylene, isopropyl alcohol
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

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END OF MSDS

MATERIAL SAFETY DATA SHEET

"Essentially Similar" to Form OSHA-20

UNICHEM INTERNATIONAL

Date Prepared 07/31/87

Supersedes Previous Sheet Dated 02/07/86

I PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL 707 N. Leech / P. O. Box 1499 / Hobbs, New Mexico 88240	EMERGENCY TELEPHONE NO. (505) 393-7751

PRODUCT NAME TECHNI-BREAK 5817 TRADE NAME: Demulsifier

CHEMICAL DESCRIPTION: Proprietary blend of oil soluble surfactants in aromatic solvent.

II HAZARDOUS INGREDIENTS

MATERIAL		TLV (UNITS)
Contains Aromatic Solvent		8 hr. TWA 100 ppm recommended

III PHYSICAL DATA

BOILING POINT, 760 mm Hg	N/D	FREEZING POINT:	-40°F
SPECIFIC GRAVITY (H_2O=1)	.91	VAPOR PRESSURE @	N/D
VAPOR DENSITY (AIR=1)	N/D	SOLUBILITY IN WATER	Dispersable
PERCENT VOLATILES BY WEIGHT	N/D	EVAPORATION RATE	N/D

APPEARANCE AND ODOR Dark amber, aromatic odor

IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD) 81° F (TCC)

FLAMMABLE LIMITS IN AIR, % BY VOLUME	LOWER	N/D	UPPER	N/D

EXTINGUISHING MEDIA: Foam, dry chemical, CO_2, water spray or fog. Use a water spray to cool fire-exposed containers.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing equipment for enclosed areas in a fire situation.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors can flow along surfaces to distant ignition sources and flash back.

Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.

V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	TLV 100ppm (estimated--not established by ACGIH or OSHA)
EFFECTS OF OVEREXPOSURE	Inhalation of high vapor, concentrations may have results ran[illegible]e from mild depression to convulsions and loss of consciousness. Concentrations over 100ppm may cause dizziness, nausea, and headache. Prolonged or repeated skin contact is irritating and wi cause defatting and dermatitus. Eye contact may cause burning and irritation. Aspiration can be a hazard if material is swallowed.
EMERGENCY AND FIRST AID PROCEDURES	SKIN: Remove contaminated clothing; wash with soap and water. EYES: Flush eyes with lots of running water. INHALATION: Remove t fresh air. Restore breathing if necessary. Call a Physician. INGESTION: Do not induce vomiting. Give white mineral oil or edib oil. Call a physician.

VI REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	
UNSTABLE	STABLE		
	XXXXXX		NONE

INCOMPATIBILITY (MATERIALS TO AVOID)	Avoid oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	Toxic fumes and gases including oxides and carbon and nitrogen.

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	
MAY OCCUR	WILL NOT OCCUR		
	XXXXXXXXX		NONE

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Remove all sources of ingintion. Provide adequate ventilation. Con[illegible]l and recover free liquid. Use vermiculite, sand, etc. to abosrb residue or small spill. Scrape up and place in covered metal container. Prevent liquid from entering sewer or water course.
WASTE DISPOSAL METHOD	Dispose of by incineration or by depositing in an approved landfill under controlled conditions. Follow all Federal, State, and local regulations.

VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)	Use respirators with organic solvent type canisters for short periods of nonroutine work at 100-2000ppm. Use self-contained breathing apparatus for higher or unknown vapor concentrations.

VENTILATION	LOCAL EXHAUST	As needed to meet TLV requirements	SPECIAL	100 lfm face velocity for exhaust hoods.
	MECHANICAL (GENERAL)	As needed to meet TLV requirements	OTHER	
PROTECTIVE GLOVES		Buna-N rubber gloves and apron to prevent contact.	EYE PROTECTION	Safety glasses or goggles and/or face shield.

OTHER PROTECTIVE EQUIPMENT	Eye wash stations should be readily accessible.

IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store containers in clean, cool, well-ventilated, low fire-risk area away from oxidizing agents and ignition sources. Ground and electrically interconnect metal containers when dispensing. Use safety cans for small amou[illegible].
OTHER PRECAUTIONS	

Product Name: TECHNI-BREAK 5979

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 1/14/87
Date Prepared 11/03/93
Version: 0000002

Product Name: TECHNI-BREAK 5979

Trade Name: Demulsifier

Chemical Description:
Proprietary blend of surfactants in aromatic solvent.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic naphtha	064741-68-0	< 85%
trimethyl benzenes	025551-13-7	< 25%
xylene	001330-20-7	< 10%
cumene	000098-82-8	< 10%
isopropyl alcohol	000067-63-0	< 10%
petroleum distillate	064742-06-9	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.890 Solubility in water: Dispersible
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 68 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that

Product Name: TECHNI-BREAK 5979

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, dizziness, drowsiness, convulsions or loss of consciousness. Inhalation or aspiration into the lungs may result in lipoid pneumonitis.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. Possible pneumonia if vomited. Can be fatal.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-BREAK 5979

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-BREAK 5979

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-BREAK 5979

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	001330-20-7	< 10%
cumene	000098-82-8	< 10%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	001330-20-7	1000
cumene	000098-82-8	5000

OSHA Exposure Limits

Component Name

trimethyl benzenes
TWA ppm: 25.0 TWA MG/M3: 125.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

Product Name: TECHNI-BREAK 5979

Section: 10 REGULATORY INFORMATION CONTINUED

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0
petroleum distillate
TWA ppm: 100.0

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, isopropyl alcohol
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-BREAK 817

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 1/03/92
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-BREAK 817

Trade Name: Emulsion Breaker

Chemical Description:
Proprietary blend of nonionic surfactants in aromatic solvent

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 70%
4,7-methano-1H-indene, octahydro	06004-38-2	< 30%
ethyl benzene	00100-41-4	< 10%
2-methylstyrene	00611-15-4	< 10%
petroleum distillate	64742-06-9	< 10%
ethyl toluene	25550-14-5	< 10%
isopropyl alcohol	00067-63-0	< 10%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
n-propyl benzene	00103-65-1	< 5%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%
1,2,3,4-tetrahydronaphthalene (tetralin)	00119-64-2	< 5%
2-ethyl-bicyclo-(2,2,1)-heptane	02146-41-0	< 5%
bicycloheptane, 2-butylidene	62211-86-3	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: appx 300 Deg.F
Specific Gravity(H2O=1) : 0.940 Solubility in water: Insoluble
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 74 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal

Product Name: TECHNI-BREAK 817

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation, including pain or a feeling of heat, discoloration, swelling and blistering, and may result in dermatitis.

Inhalation: may cause mild irritation of the eyes, nose, and throat. Prolonged exposures may cause CNS depression, headache, nausea, dizziness, loss of appetite, weakness, loss of coordination, loss of consciousness and convulsions. Inhalation may result in lipoid pneumonitis.

Ingestion: may cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. Can be fatal.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

Product Name: TECHNI-BREAK 817

Section: 05 HEALTH HAZARD DATA CONTINUED

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in

Product Name: TECHNI-BREAK 817

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or

Product Name: TECHNI-BREAK 817

Section: 09 SPECIAL PRECAUTIONS CONTINUED

other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
ethyl benzene	00100-41-4	< 10%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the

Product Name: TECHNI-BREAK 817

Section: 10 REGULATORY INFORMATION CONTINUED

National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
ethyl benzene	00100-41-4	1000
xylene	01330-20-7	1000
naphthalene	00091-20-3	100
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

petroleum distillate
TWA ppm: 400.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: naphthalene, ethyl benzene, xylene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

MATERIAL SAFETY DATA SHEET

"Essentially Similar" to Form OSHA-20

UNICHEM INTERNATIONAL

Date Prepared 12/09/87

Supersedes Previous Sheet Dated NEW

I PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL 707 N. Leech / P. O. Box 1499 / Hobbs, New Mexico 88240	EMERGENCY TELEPHONE NO. (505) 393-7751

PRODUCT NAME TECHNI-BREAK 978 TRADE NAME: Demulsifier

CHEMICAL DESCRIPTION:

Proprietary blend of surfactants and quaternary compounds in aromatic solvent.

II HAZARDOUS INGREDIENTS

MATERIAL	%	TLV (UNITS)
Contains Aromatic Solvent		8 hr. TW 100 ppm recommended

III PHYSICAL DATA

BOILING POINT, 760 mm Hg	N/D	FREEZING POINT:	-40°F
SPECIFIC GRAVITY (H_2O=1)	.93	VAPOR PRESSURE @	N/D
VAPOR DENSITY (AIR=1)	N/D	SOLUBILITY IN WATER	Dispersible
PERCENT VOLATILES BY WEIGHT	N/D	EVAPORATION RATE	N/D

APPEARANCE AND ODOR

IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD) 67°F (TCC)

FLAMMABLE LIMITS IN AIR, % BY VOLUME	LOWER	N/D	UPPER	N/D

EXTINGUISHING MEDIA	Foam, dry chemical, CO_2, water spray or fog. Use a water spray to cool fire-exposed containers.
SPECIAL FIRE FIGHTING PROCEDURES	Use self-contained breathing equipment for enclosed areas in a fire situation.
UNUSUAL FIRE AND EXPLOSION HAZARDS	Vapors can flow along surfaces to distant ignition sources and flash back.

Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of an materials designated.

N/D - Not Determined

V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	TLV 100ppm (estimated--not established by ACGIH or OSHA)
EFFECTS OF OVEREXPOSURE	Inhalation of high vapor, concentrations may have results ranging from mild depression to convulsions and loss of consciousness. Concentrations over 100ppm may cause dizziness, nausea, and headache. Prolonged or repeated skin contact is irritating and will cause defatting and dermatitus. Eye contact may cause burning and irritation. Aspiration can be a hazard if material is swallowed.
EMERGENCY AND FIRST AID PROCEDURES	SKIN: Remove contaminated clothing; wash with soap and water. EYES: Flush eyes with lots of running water. INHALATION: Remove to fresh air. Restore breathing if necessary. Call a Physician. INGESTION: Do not induce vomiting. Give white mineral oil or edible oil. Call a physician.

VI REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	
UNSTABLE	STABLE		
	XXXXXX		NONE

INCOMPATIBILITY (MATERIALS TO AVOID)	Avoid oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS	Toxic fumes and gases including oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	
MAY OCCUR	WILL NOT OCCUR		
	XXXXXXXX		NONE

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Remove all sources of ignition. Provide adequate ventilation. Contain and recover free liquid. Use vermiculite, sand, etc. to absorb residue or small spill. Scrape up and place in covered metal container. Prevent liquid from entering sewer or water course.
WASTE DISPOSAL METHOD	Dispose of by incineration or by depositing in an approved landfill under controlled conditions. Follow all Federal, State, and local regulations.

VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)	Use respirators with organic solvent type canisters for short periods of nonroutine work at 100-2000ppm. Use self-contained breathing apparatus for higher or unknown vapor concentrations.

VENTILATION	LOCAL EXHAUST	As needed to meet TLV requirements	SPECIAL	100 lfm face velocity for exhaust hoods.
	MECHANICAL (GENERAL)	As needed to meet TLV requirements	OTHER	
PROTECTIVE GLOVES		Buna-N rubber gloves and apron to prevent contact.	EYE PROTECTION	Safety glasses or goggles and/or face shield.

OTHER PROTECTIVE EQUIPMENT	Eye wash stations should be readily accessible.

IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store containers in clean, cool, well-ventilated, low fire-risk area away from oxidizing agents and ignition sources. Ground and electrically interconnect metal containers when dispensing. Use safety cans for small am
OTHER PRECAUTIONS	

Product Name: TECHNI-BREAK 974

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 1/16/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-BREAK 974

Trade Name: Emulsion Breaker

Chemical Description:
Proprietary blend of surfactants in aromatic solvent.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
trimethyl benzenes	25551-13-7	< 20%
xylene	01330-20-7	< 10%
isopropyl alcohol	00067-63-0	< 10%
cumene	00098-82-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.888 Solubility in water: Insoluble
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 73 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and

Product Name: TECHNI-BREAK 974

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin contact & absorption: repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: prolonged exposures may cause nausea, headache, dizziness, drowsiness, mild narcosis, CNS depression, convulsions or loss of consciousness. Vapors may cause mild irritation of the eyes, nose, and throat. Inhalation or aspiration into the lungs may result in lipoid pneumonitis.

Ingestion: will cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. Possible lipoid pneumonitis if vomited. May cause serious injury and can be fatal.

Signs and symptoms of chronic exposure are similar to those of acute exposure.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or

Product Name: TECHNI-BREAK 974

Section: 05 HEALTH HAZARD DATA CONTINUED

poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component

Product Name: TECHNI-BREAK 974

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-BREAK 974

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	01330-20-7	< 10%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

Product Name: TECHNI-BREAK 974

Section: 10 REGULATORY INFORMATION CONTINUED

trimethyl benzenes
TWA ppm: 25.0 TWA MG/M3: 125.0
xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0
isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0
cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: x

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, trimethyl benzenes
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-BREAK 974

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 1/16/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-BREAK 974

Trade Name: Emulsion Breaker

Chemical Description:
Proprietary blend of surfactants in aromatic solvent.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
trimethyl benzenes	25551-13-7	< 20%
xylene	01330-20-7	< 10%
isopropyl alcohol	00067-63-0	< 10%
cumene	00098-82-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.888 Solubility in water: Insoluble
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 73 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and

Product Name: TECHNI-BREAK 974

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin contact & absorption: repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: prolonged exposures may cause nausea, headache, dizziness, drowsiness, mild narcosis, CNS depression, convulsions or loss of consciousness. Vapors may cause mild irritation of the eyes, nose, and throat. Inhalation or aspiration into the lungs may result in lipoid pneumonitis.

Ingestion: will cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. Possible lipoid pneumonitis if vomited. May cause serious injury and can be fatal.

Signs and symptoms of chronic exposure are similar to those of acute exposure.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or

Product Name: TECHNI-BREAK 974

Section: 05 HEALTH HAZARD DATA CONTINUED

poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

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Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component

Product Name: TECHNI-BREAK 974

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

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Eye Protection

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Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

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FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-BREAK 974

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

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Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

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X Chronic Health Hazard	_ Reactive	

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cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

Product Name: TECHNI-BREAK 974

Section: 10 REGULATORY INFORMATION CONTINUED

trimethyl benzenes
TWA ppm: 25.0 TWA MG/M3: 125.0
xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0
isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0
cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: x

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, trimethyl benzenes
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

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END OF MSDS

Product Name: TECHNI-BREAK 917

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 3/03/92
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-BREAK 917

Trade Name: Emulsion breaker

Chemical Description:
Proprietary blend of nonionic surfactants in aromatic solvent

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 65%
4,7-methano-1H-indene, octahydro	06004-38-2	< 30%
ethyl benzene	00100-41-4	< 10%
2-methylstyrene	00611-15-4	< 10%
isopropyl alcohol	00067-63-0	< 10%
ethyl toluene	25550-14-5	< 10%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
n-propyl benzene	00103-65-1	< 5%
xylene	01330-20-7	< 5%
petroleum solvent	64742-95-6	< 5%
petroleum distillate	64742-06-9	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%
1,2,3,4-tetrahydronaphthalene (tetralin)	00119-64-2	< 5%
2-ethyl-bicyclo-(2,2,1)-heptane	02146-41-0	< 5%
bicycloheptane, 2-butylidene	62211-86-3	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: appx 300 Deg.F
Specific Gravity(H2O=1) : 0.942 Solubility in water: Insoluble
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 67 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Product Name: TECHNI-BREAK 917

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: can cause moderate irritation including pain or a feeling of heat, discoloration, swelling and blistering. Repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, mild narcosis, dizziness, lightheadedness, loss of appetite, weakness and loss of coordination. Can cause pulmonary edema and bronchial emphysema.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. If aspirated into the lungs, can cause severe injury to the lungs and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally.

Product Name: TECHNI-BREAK 917

Section: 05 HEALTH HAZARD DATA CONTINUED

Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Product Name: TECHNI-BREAK 917

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly

Product Name: TECHNI-BREAK 917

Section: 09 SPECIAL PRECAUTIONS CONTINUED

marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
ethyl benzene	00100-41-4	< 10%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and

Product Name: TECHNI-BREAK 917

Section: 10 REGULATORY INFORMATION CONTINUED

Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
ethyl benzene	00100-41-4	1000
xylene	01330-20-7	1000
naphthalene	00091-20-3	100
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

petroleum solvent
TWA ppm: 100.0

petroleum distillate
TWA ppm: 100.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, ethyl benzene, xylene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is

Product Name: TECHNI-BREAK 917

Section: 10 REGULATORY INFORMATION CONTINUED

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correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

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END OF MSDS

Product Name: TECHNI-BREAK 916

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 3/03/92
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-BREAK 916

Trade Name: Emulsion breaker

Chemical Description:
Proprietary blend of nonionic surfactants in aromatic solvent

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 65%
4,7-methano-1H-indene, octahydro	06004-38-2	< 30%
ethyl benzene	00100-41-4	< 10%
2-methylstyrene	00611-15-4	< 10%
isopropyl alcohol	00067-63-0	< 10%
ethyl toluene	25550-14-5	< 10%
bicycloheptane,2 methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
n-propyl benzene	00103-65-1	< 5%
xylene	01330-20-7	< 5%
petroleum solvent	64742-95-6	< 5%
petroleum distillate	64742-06-9	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%
1,2,3,4-tetrahydronaphthalene (tetralin)	00119-64-2	< 5%
2-ethyl-bicyclo-(2,2,1)-heptane	02146-41-0	< 5%
bicycloheptane, 2-butylidene	62211-86-3	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: appx 300 Deg.F
Specific Gravity(H2O=1) : 0.942 Solubility in water: Insoluble
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 67 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Product Name: TECHNI-BREAK 916

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: can cause moderate irritation including pain or a feeling of heat, discoloration, swelling and blistering. Repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, mild narcosis, dizziness, lightheadedness, loss of appetite, weakness and loss of coordination. Can cause pulmonary edema and bronchial emphysema.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. If aspirated into the lungs, can cause severe injury to the lungs and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally.

Product Name: TECHNI-BREAK 916

Section: 05 HEALTH HAZARD DATA CONTINUED

Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Product Name: TECHNI-BREAK 916

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly

Product Name: TECHNI-BREAK 916

Section: 09 SPECIAL PRECAUTIONS CONTINUED

marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
ethyl benzene	00100-41-4	< 10%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and

Product Name: TECHNI-BREAK 916

Section: 10 REGULATORY INFORMATION CONTINUED

Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
ethyl benzene	00100-41-4	1000
xylene	01330-20-7	1000
naphthalene	00091-20-3	100
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

petroleum solvent
TWA ppm: 100.0

petroleum distillate
TWA ppm: 100.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, ethyl benzene, xylene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is

Product Name: TECHNI-BREAK 916

Section: 10 REGULATORY INFORMATION CONTINUED

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correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-CLEAN 405

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 4/24/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-CLEAN 405

Trade Name: Scale Remover

Chemical Description:
Proprietary blend of water soluble compounds.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
NONE		

Section: 03 PHYSICAL DATA

Freezing Point: - 1 Deg.F.
Specific Gravity(H2O=1) : 1.230 Solubility in water: Complete
Appearance and Odor: Amber liquid; aciditic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): None

Extinguishing Media

Material is not combustible. Keep containers cool. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Fire fighters should wear self-contained breathing apparatus with a full facepiece operated in the pressure-demand or positive-pressure mode.

Unusual Fire and Explosion Hazards

None

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may be mildly irritating to the eyes.
Skin Contact: mildly irritating to the skin only after prolonged and repeated contact. Absorption through skin may cause damage to kidneys and depression of central nervous system.

Product Name: TECHNI-CLEAN 405

Section: 05 HEALTH HAZARD DATA CONTINUED

Inhalation: prolonged and repeated overexposure to vapors may cause damage to kidneys, liver, lungs, blood or central nervous system.
Ingestion: can cause central nervous system stimulation followed by depression and can cause kidney damage which may be fatal.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Persons not wearing suitable personal protective equipment

Product Name: TECHNI-CLEAN 405

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled material with sand or earth. Recovered undamaged or minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

No respiratory protection should be necessary if good hygiene practices are strictly followed.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even

Product Name: TECHNI-CLEAN 405

Section: 09 SPECIAL PRECAUTIONS CONTINUED

empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
_ Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
_ Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Product Name: TECHNI-CLEAN 405

Section: 10 REGULATORY INFORMATION CONTINUED

Component Name	CAS #	% Range
NONE		

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
NONE		

OSHA Exposure Limits

Component Name
NONE

National Fire Protection Agency

1 Health	0 Fire
0 Reactive	____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Nonregulated material
Hazardous Substance RQ: *NONE* Emergency Response Guide Number: 31
Labels: None

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-CLEAN 420

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 4/15/92
Date Prepared 9/21/93
Version: 0000003

Product Name: TECHNI-CLEAN 420

Trade Name: Surfactant

Chemical Description:
Proprietary blend of water soluble surfactants

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 25%

Section: 03 PHYSICAL DATA

Freezing Point: - 1 Deg.F.
Specific Gravity(H2O=1) : 0.990 Solubility in water: Soluble
Appearance and Odor: Amber liquid; alcoholic odor.

Section: 04 FIRE AND FXPLOSION HAZARD DATA

Flash Point (Test Method): 107 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is combustible and under certain conditions may release vapors that pose a severe fire hazard. These vapors may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant

Product Name: TECHNI-CLEAN 420

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

from material handling point. Containers may explode from internal pressure if confined to a fire. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness or swelling. May cause permanent eye injury, even blindness.

Skin Contact: prolonged or repeated exposure may cause skin irritation, redness, edema or drying of the skin.

Skin Absorption: exposure to this material can result in absorption through skin causing health hazard.

Inhalation: mists may cause irritation to upper respiratory tract. Overexposure may cause coughing, chest discomfort, shortness of breath, dizziness, intoxication and collapse. Excessive exposure may cause liver, kidney effects.

Ingestion: has caused acidosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death. May cause lethargy, nausea, vomiting, and diarrhea.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-CLEAN 420

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-CLEAN 420

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-CLEAN 420

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 25%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name
methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
2 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.

Product Name: TECHNI-CLEAN 420

Section: 10 REGULATORY INFORMATION CONTINUED

Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 20000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-CLEAN 436

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/21/93
Date Prepared 2/22/94
Version: 0000003

Product Name: TECHNI-CLEAN 436

Trade Name: Acidic Cleaning Agent

Chemical Description:
Proprietary blend of micellar additives in inhibited hydrochloric acid

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
hydrochloric acid	07647-01-0	< 20%
isopropyl alcohol	00067-63-0	< 2%
2-ethyl hexanol	00104-76-7	< 1%

Section: 03 PHYSICAL DATA

Freezing Point: - 1 Deg.F.
Boiling Point, 760 mm Hg: 200 Deg.F
Specific Gravity(H2O=1) : 1.072 Solubility in water: Complete
Appearance and Odor: Clear, yellow liquid; acidic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): WILL NOT FLASH

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

None

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Product Name: TECHNI-CLEAN 436

Section: 05 HEALTH HAZARD DATA CONTINUED

Eye Contact: contact may cause severe irritation, intense stinging, tearing, redness, swelling, burning, conjunctivitis, corneal necrosis and burns with impairment or permanent loss of vision.

Skin Contact: may cause severe irritation, inflammation, ulceration, necrosis and chemical burns. Prolonged contact may result in absorption through the skin causing CNS depression and possible injury to kidneys, liver, blood and/or bone marrow. May cause dermatitis.

Inhalation: may irritate and burn the nose, throat and respiratory tract. At high levels may cause inflammation and occasionally ulceration of the nose, throat or larynx, bronchitis, pneumonia, palpitations and headache. Higher concentrations may cause necrosis of the tracheal and bronchial epithelium, nasoseptal perforation, atelectasis, emphysema, damage to pulmonary blood vessels and lesions of the liver and other organs. Repeated or prolonged exposure may cause erosion and discoloration of exposed teeth, chronic bronchitis and gastritis. Other symptoms may include coughing, choking, CNS depression, headache, nausea, giddiness, vomiting, intoxication and dizziness. In extreme cases, unconsciousness and death may occur.

Ingestion: may cause burns of the mouth, throat, esophagus and stomach with consequent pain, uneasiness, headache, nausea, salivation, vomiting, diarrhea, chills, shock and intense thirst. Shock symptoms may develop including rapid pulse, sweating and collapse. Nephritis, fever, blindness, perforation of the intestinal tract, and circulatory collapse may occur. Death may occur due to esophageal or gastric necrosis.

Chronic overexposure: 2-ethyl hexanol has been reported to be teratogenic (to cause birth defects) in laboratory rats when administered orally to pregnant Wistar rats. Subsequent studies have shown not to cause birth defects in rats when administered by inhalation or dermally. It is believed that occupational exposure by inhalation or dermal route poses no significant threat to the embryo/fetus. Selected for NTP carcinogenesis studies April 1990. Chronic exposure or repeated overexposure may result in damage to the blood.

Aggravated Medical Conditions: pre-existing eye, skin and respiratory disorders may be aggravated by exposure. Photosensitization reactions may occur in persons previously exposed.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

Product Name: TECHNI-CLEAN 436

Section: 05 HEALTH HAZARD DATA CONTINUED

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with oxidizers or alkaline materials.

Hazardous Decomposition Products

Carbon monoxide, phosgene, and hydrogen chloride.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled material with sand or earth. Recovered undamaged or minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Product Name: TECHNI-CLEAN 436

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved supplied air respirator is advised in absence of proper environmental controls. OSHA regulations permit other NIOSH/MSHA approved respirators (negative pressure combination organic vapor/acid gas cartridge type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposures.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or

Product Name: TECHNI-CLEAN 436

Section: 09 SPECIAL PRECAUTIONS CONTINUED

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other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard _ Sudden Release of Pressure _ Fire
X Chronic Health Hazard _ Reactive

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
hydrochloric acid	07647-01-0	< 20%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in

Product Name: TECHNI-CLEAN 436

Section: 10 REGULATORY INFORMATION CONTINUED

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pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
hydrochloric acid	07647-01-0	5000

OSHA Exposure Limits

Component Name
hydrochloric acid

Ceiling ppm: 5.0 Ceiling MG/M3 7.0
isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

National Fire Protection Agency

3 Health	1 Fire
0 Reactive	ACID Other

Department of Transportation Shipping Information

Proper Shipping Name: Hydrochloric acid, solution
Hazard Class: 8 Identification: UN1789
Packaging Group: PG II
Contains: hydrochloric acid
Hazardous Substance RQ: 25000# Emergency Response Guide Number: 60
Labels: Corrosive

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-CLEAN 436

Section: 11 LABEL INFORMATION

DANGER! CAUSES SEVERE EYE AND SKIN BURNS
MAY BE HARMFUL IF SWALLOWED OR INHALED

Do not get in eyes, on skin or on clothing.
Avoid breathing vapors. Keep container closed.
Use with adequate ventilation. Wash thoroughly after handling.

FIRST AID
=========
IN CASE OF SWALLOWING:
Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or a poison control center. Never give anything by mouth to an unconscious person.
IN CASE OF CONTACT:
Immediately flush eyes and skin with plenty of water for 15 minutes while removing contaminated clothing and shoes. Discard contaminated shoes. Lander clothing before reuse. Call a physician.
IN CASE OF INHALATION:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

CONTAINER HANDLING AND STORAGE:
Keep container tightly closed. Keep closure up to avoid leakage. Drum must not be washed out or used used for other purposes. Replace closure after each withdrawal. Do not use pressure to empty drum. Do not transfer this material to improperly marked container. Keep out of reach of children.

IN CASE OF SPILLAGE:
Absorb spill with inert materials (e.g., dry sand or earth). Place in a chemical waste container. Flush spill area with water spray. For large spill, dike for later disposal.

CONTAINER DISPOSAL:
This container will contain traces of hazardous material when emptied. Do not cut or weld on empty container. Follow local, state and federal regulations for disposal.

MATERIAL SAFETY DATA SHEET

"Essentially Similar" to Form OSHA-20

UNICHEM INTERNATIONAL

Date Prepared 11/19/90

Supersedes Previous Sheet Dated 2/5/87

I PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL 707 N. Leech / P. O. Box 1499 / Hobbs, New Mexico 88240	EMERGENCY TELEPHONE NO. (505) 393-7751

PRODUCT NAME TECHNI CLEAN 456 TRADE NAME: Acid/Solvent Cleaner

CHEMICAL DESCRIPTION:

Emulsion of hydrochloric acid, aromatic solvents, and surface active materials.

II HAZARDOUS INGREDIENTS

MATERIAL	%	TLV (UNITS)
Trimethyl benzene	< 10	
Hydrochloric acid	< 50	8 hr. TWA 5 ppm or 7 mg/m^3
Xylene	< 5	
Aromatic Solvent	< 25	8 hr. TWA 100 ppm recommended
RQ 20,000 lbs for Xylene		

III PHYSICAL DATA

BOILING POINT, 760 mm Hg	N/D	FREEZING POINT:	$-30^{\circ}F$
SPECIFIC GRAVITY (H_2O=1)	1.04	VAPOR PRESSURE @	N/D
VAPOR DENSITY (AIR=1)	N/D	SOLUBILITY IN WATER	Dispersible
PERCENT VOLATILES BY WEIGHT	N/D	EVAPORATION RATE	N/D

APPEARANCE AND ODOR Milky emulsion, acid odor

IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD) $105^{\circ}F$

FLAMMABLE LIMITS IN AIR, % BY VOLUME	LOWER	N/D	UPPER	N/D

EXTINGUISHING MEDIA Foam, dry chemical, CO_2, water spray, or fog.

SPECIAL FIRE FIGHTING PROCEDURES Fire fighters should be made aware of the strongly acidic nature of this materials. Use self-contained breathing equipment for enclosed areas.

UNUSUAL FIRE AND EXPLOSION HAZARDS Vapors can flow to distant ignition sources and flash back.

Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.

V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	None established
EFFECTS OF OVEREXPOSURE	This material on prolonged contact can cause severe bu skin and eyes. Inhaled vapor or mist can irritate tissue the entire respiratory tract.
EMERGENCY AND FIRST AID PROCEDURES	SKIN: Flush skin thoroughly with water, apply skin cream. EYES: Flush for at least 15 min. with running water. Get pr medical attention. INGESTION: DO NOT induce vomiting. Dilu with water, milk or egg whites. INHALATION: Remove to fresh Administer artificial respiration if necessary.

VI REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	None
UNSTABLE	STABLE		
	XXX		

INCOMPATIBILITY (MATERIALS TO AVOID)	Strong alkaline materials, sulfites , sulfides, cyanides, formaldehyde
HAZARDOUS DECOMPOSITION PRODUCTS	Reaction with metals will produce flammable hydrogen gas hydrogen chloride

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	None
MAY OCCUR	WILL NOT OCCUR		
	XXX		

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Dilute small spills with water. Neutralization is necessar before disposal.
WASTE DISPOSAL METHOD	Plans must be made in advance to handle large spills in accord with Federal, State, and local regulations.

VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)	Self-contained breathing apparatus, canister mask, chemical cartridge respirator.

VENTILATION	LOCAL EXHAUST	As needed to meet TLV requirements	SPECIAL	None
	MECHANICAL (GENERAL)	As needed to prevent excessive levels of acidic mist or fume	OTHER	None
PROTECTIVE GLOVES		Rubber	EYE PROTECTION	Safety glasses or goggles and/or fac shield

OTHER PROTECTIVE EQUIPMENT	An apron should be worn to prevent skin contact.

IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store away from alkaline materials.
OTHER PRECAUTIONS	Do NOT take internally. Workers using this material must be edu as to the hazards of this strongly acidic material.

Product Name: TECHNI-CLEAN 470

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 7/10/90
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-CLEAN 470

Trade Name: Surfactant/Cleaner

Chemical Description:
Proprietary blend of water soluble surfactants and acid.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
phosphoric acid	07664-38-2	< 35%
trimethyl benzenes	25551-13-7	< 5%
xylene	01330-20-7	< 5%
cumene	00098-82-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: 5 Deg.F.
Specific Gravity(H2O=1) : 1.160 Solubility in water: Dispersible
Appearance and Odor: Emulsion, aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 125 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters,

Product Name: TECHNI-CLEAN 470

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye contact: May cause conjunctiva, irritation and serious eye burns. Permanent damage, while uncommon can occur.

Skin contact & absorption: Strongly irritating and corrosive to the skin, dermatitis. Ingestion: Throat and stomach burning sensation. Possible pneumonia if vomited. May cause irritation and burns to the mouth, throat and digestive tract. May cause lethargy, nausea, vomiting, and diarrhea. Large amounts, if retained, lead to symptoms of central nervous system depression.

Inhalation: Irritation of respiratory tract. Mists may cause chest discomfort, mucous membrane irritation, coughing, irritation of eyes, nose and throat, and dizziness.

Effects of overexposure: Acute exposures cause irritation and corrosion to the eyes, skin, respiratory and digestive tracts. Prompt treatment is important to minimize effects of exposure. Signs and symptoms of chronic exposure are similar to those of acute exposure.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an

Product Name: TECHNI-CLEAN 470

Section: 05 HEALTH HAZARD DATA CONTINUED

unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid
None known.

Incompatibility (Materials to Avoid)
Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products
Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid
None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled
Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method
Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection
If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved supplied air respirator is advised in absence of proper environmental controls. OSHA regulations permit other NIOSH/MSHA approved respirators

Product Name: TECHNI-CLEAN 470

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

(negative pressure combination organic vapor/acid gas cartridge type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposures.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Store in a cool, dry place away from ignition sources. Store away from oxidizers. Keep away from heat, sparks, and flames. Use with adequate ventilation. Do not breath vapors. Avoid prolonged or repeated contact with skin.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-CLEAN 470

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
phosphoric acid	07664-38-2	< 35%
xylene	01330-20-7	< 5%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
phosphoric acid	07664-38-2	5000
xylene	01330-20-7	1000
cumene	00098-82-8	5000

Product Name: TECHNI-CLEAN 470

Section: 10 REGULATORY INFORMATION CONTINUED

OSHA Exposure Limits

Component Name

phosphoric acid
TWA MG/M3: 1.0 STEL MG/M3: 3.0

trimethyl benzenes
TWA ppm: 25.0 TWA MG/M3: 125.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: x

National Fire Protection Agency

2 Health 2 Fire
0 Reactive ACID Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, corrosive, n.o.s.
Hazard Class: 3 Identification: UN2924
Packaging Group: PG III
Contains: xylene, phosphoric acid
Hazardous Substance RQ: 14286# Emergency Response Guide Number: 29
Labels: Flammable liquid Corrosive

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-FOAM 558W

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/21/93
Date Prepared 12/21/93
Version: 0000003

Product Name: TECHNI-FOAM 558W

Trade Name: Foaming Agent

Chemical Description:
Proprietary blend of anionic surfactants in water.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	000067-56-1	< 35%
isopropyl alcohol	000067-63-0	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: 200 Deg.F
Specific Gravity(H2O=1) : 0.960 Solubility in water: Complete
Appearance and Odor: Clear, yellow liquid; sweet odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 84 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-FOAM 558W

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness, swelling or blurred vision.

Skin Contact: may produce skin irritation. The liquid can defat the skin, producing a dermatitis characterized by drying and fissuring. Exposure to this material can result in absorption through skin causing health hazard.

Inhalation: can cause nasal and respiratory irritation, weakness, fatigue, coughing, shortness of breath, dizziness, intoxication, nausea, headache collapse, unconsciousness and death.

Ingestion: can cause gastrointestinal irritation, acidosis, nausea, vomiting, diarrhea, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Medical Conditions Generally Aggravated by Exposure: may aggravate asthma and inflammatory or fibrotic pulmonary disease.

Chronic Overexposure: can cause liver abnormalities, kidney damage, eye damage, lung damage, brain damage and nervous system damage.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water.

Product Name: TECHNI-FOAM 558W

Section: 05 HEALTH HAZARD DATA CONTINUED

Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component

Product Name: TECHNI-FOAM 558W

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-FOAM 558W

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	000067-56-1	< 35%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	000067-56-1	5000

OSHA Exposure Limits

Component Name

methanol

TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 325.0 Skin: X

Product Name: TECHNI-FOAM 558W

Section: 10 REGULATORY INFORMATION CONTINUED

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

National Fire Protection Agency

2 Health	3 Fire
0 Reactive	____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol, isopropyl alcohol
Hazardous Substance RQ: 14286# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 314

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 12/09/91
Date Prepared 9/21/93
Version: 0000004

Product Name: TECHNI-HIB 314

Trade Name: Corrosion inhibitor

Chemical Description:
Proprietary blend of organic amines and acids in aromatic solvent

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 35%
kerosene	08008-20-6	< 30%
4,7-methano-1H-indene, octahydro	06004-38-2	< 15%
isopropyl alcohol	00067-63-0	< 10%
ethyl benzene	00100-41-4	< 5%
2-methylstyrene	00611-15-4	< 5%
ethyl toluene	25550-14-5	< 5%
aromatic hydrocarbon solvent	64741-68-0	< 5%
naphthalene	00091-20-3	< 5%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
xylene	01330-20-7	< 5%
n-propyl benzene	00103-65-1	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: > 300 Deg.F
Specific Gravity(H2O=1) : 0.890 Solubility in water: Insoluble
Appearance and Odor: Clear amber liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 70 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the

Product Name: TECHNI-HIB 314

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning, redness, tearing, and blurred vision. If not promptly removed, may cause eye damage.

Skin Contact: moderate irritation including pain or a feeling of heat, discoloration, swelling and blistering. Repeated or prolonged contact with the skin may cause dermatitis.

Inhalation: vapors may cause mild irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache and mild narcosis. High vapor concentrations are anesthetic and may cause headaches, dizziness, drowsiness, coughing, mental confusion, lightheadedness, loss of coordination, insomnia, vomiting, blurred vision, flushing of face, slurred speech, difficulty in swallowing, loss of appetite, fatigue, weakness, pain in limbs, psychosis, tremors, exaggerated tendon reflexes, irregular heartbeat, unconsciousness, respiratory arrest, convulsions, coma, and death. Inhalation or aspiration into the lungs may result in lipoid pneumonitis. Chronic exposure may cause liver and kidney damage or anemia.

Ingestion: will cause burning of the gastrointestinal tract, nausea, vomiting, diarrhea, bleeding, CNS depression, hemolysis, and pulmonary damage. If aspirated into the lungs, can cause severe injury to the lungs and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and

Product Name: TECHNI-HIB 314

Section: 05 HEALTH HAZARD DATA CONTINUED

launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill

Product Name: TECHNI-HIB 314

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Product Name: TECHNI-HIB 314

Section: 09 SPECIAL PRECAUTIONS CONTINUED

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range

Product Name: TECHNI-HIB 314

Section: 10 REGULATORY INFORMATION CONTINUED

ethyl benzene	00100-41-4	<	5%
naphthalene	00091-20-3	<	5%
xylene	01330-20-7	<	5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
ethyl benzene	00100-41-4	1000
naphthalene	00091-20-3	100
xylene	01330-20-7	1000

OSHA Exposure Limits

Component Name

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, ethyl benzene, xylene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability

Product Name: TECHNI-HIB 314

Section: 10 REGULATORY INFORMATION CONTINUED

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for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 366W

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/21/93
Date Prepared 9/29/93
Version: 0000004

Product Name: TECHNI-HIB 366W

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary blend of cationic amines in water

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
isopropyl alcohol	00067-63-0	< 30%
methanol	00067-56-1	< 15%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: 200 Deg.F
Specific Gravity(H2O=1) : 0.918 Solubility in water: Complete
Appearance and Odor: Dark brown liquid; pungent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 64 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters,

Product Name: TECHNI-HIB 366W

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause tearing, redness, swelling, intense stinging and burning. May cause eye damage.
Skin Contact: may irritate skin and cause dermatitis.
Skin Absorption: exposure to this material can result in absorption through skin causing health hazard.
Inhalation: can cause irritation of the eyes, nose, throat and lungs. Can cause nausea, headache, mild narcosis, dizziness, coughing, shortness of breath, depression, loss of appetite, weakness, lack of coordination, intoxication, collapse, unconsciousness, cardiac depression, optic complications, coma and death.
Ingestion: may cause burning of the gastrointestinal tract, acidosis, nausea, vomiting, narcosis, lethargy, diarrhea, bleeding, CNS depression, hemolysis, pulmonary damage and death. Has caused ocular toxicity ranging from diminished visual capacity to complete blindness.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-HIB 366W

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-HIB 366W

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

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whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-HIB 366W

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 15%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name
isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0
methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Product Name: TECHNI-HIB 366W

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: methanol, isopropyl alcohol
Hazardous Substance RQ: 33333# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 368

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 7/17/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-HIB 368

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary blend of organic amines

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 15%
isopropyl alcohol	00067-63-0	< 10%

Section: 03 PHYSICAL DATA

Freezing Point: - 2 Deg.F.
Specific Gravity(H2O=1) : 0.990 Solubility in water: Soluble
Appearance and Odor: Dark amber liquid; pungent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 93 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling

Product Name: TECHNI-HIB 368

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness or swelling.
Skin Contact: may produce skin irritation or burns.
Skin Absorption: exposure to this material can result in absorption through skin causing health hazard.
Inhalation: overexposure may cause nasal and respiratory irritation, coughing, shortness of breath, depression, headache, dizziness, nausea, narcosis, loss of appetite, weakness, lack of coordination, intoxication, collapse, unconsciousness, cardiac depression, optic complications and coma. Concentrated exposure may also cause symptoms of lack of oxygen leading to collapse and possible death.
Ingestion: may cause acidosis, damage to throat and esophagus, narcosis, nausea, blindness, collapse, coma and possible death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-HIB 368

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-HIB 368

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-HIB 368

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 15%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name

methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: x

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Product Name: TECHNI-HIB 368

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol, isopropyl alcohol
Hazardous Substance RQ: 33300# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 370

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/07/93
Date Prepared 9/21/93
Version: 0000004

Product Name: TECHNI-HIB 370

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary blend of cationic compounds

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
isopropyl alcohol	00067-63-0	< 25%
methanol	00067-56-1	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: 2 Deg.F.
Boiling Point, 760 mm Hg: appx 190 Deg.F
Specific Gravity(H2O=1) : 0.956 Solubility in water: Complete
Appearance and Odor: Clear amber liquid; pungent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 98 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-HIB 370

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, dizziness, unconsciousness, cardiac depression, optic complications and death.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, blindness and pulmonary damage. Can be fatal.

Chronic Exposure: For methanol, chronic poisoning from repeated exposure has been manifested by conjunctivitis, headache, giddiness, sleeplessness, gastric disturbances and failure of vision.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-HIB 370

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-HIB 370

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-HIB 370

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 325.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Product Name: TECHNI-HIB 370

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol, isopropyl alcohol
Hazardous Substance RQ: 100000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 377W

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 11/20/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-HIB 377W

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary quaternary ammonium chloride compound in water

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 50%
alkyl dimethyl benzyl ammonium chloride	00139-07-1	< 20%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.890 Solubility in water: Complete
Appearance and Odor: Clear, amber liquid; alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 60 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling

Product Name: TECHNI-HIB 377W

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness or swelling.

Skin Irritation: may produce skin irritation. Exposure to this material can result in absorption through skin causing health hazard.

Inhalation: overexposure may cause coughing, shortness of breath, dizziness, intoxication, collapse, optic complications, unconsciousness, cardiac depression, and death.

Ingestion: has caused nausea, acidosis, narcosis, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Product Name: TECHNI-HIB 377W

Section: 06 REACTIVITY DATA CONTINUED

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated

Product Name: TECHNI-HIB 377W

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory

Product Name: TECHNI-HIB 377W

Section: 10 REGULATORY INFORMATION CONTINUED

requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 50%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name

methanol

TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: x

National Fire Protection Agency

2 Health	3 Fire
0 Reactive	____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.

Product Name: TECHNI-HIB 377W

Section: 10 REGULATORY INFORMATION CONTINUED

Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 606

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 8/09/90
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-HIB 606

Trade Name: Oxygen scavenger/Corr. Inhib.

Chemical Description:
Proprietary blend of organic amines and sulfite in water.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 25%
ammonium bisulfite	10192-30-0	< 10%
isopropyl alcohol	00067-63-0	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.980 Solubility in water: Soluble
Appearance and Odor: Dark amber liquid.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 85 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters,

Product Name: TECHNI-HIB 606

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye contact: Causes moderate to severe conjunctival irritation, (including burning sensation, tearing, redness or swelling), corneal injury and iritis. Corneal injury may be marked, extensive, and if not promptly treated, may possibly lead to permanent impairment of vision.

Skin contact: Causes local redness, swelling and chemical burns. May cause immediate skin irritation, blistering and/or dermatitis in some individuals.

Skin absorption: Prolonged or widespread exposure may result in the absorption of potentially harmful amounts of material. Exposure to this material can result in absorption through skin causing health hazard.

Ingestion: May cause blindness, narcosis, nausea, vomiting, throat and abdominal pain, acidosis, diarrhea, dizziness, weakness, thirst, collapse and possible coma or death. The nature and severity of these signs and symptoms will be dependent on the amount swallowed.

Inhalation: Vapors are irritating and may cause excessive tear formation, intoxication, burning sensation of the nose and throat, coughing, wheezing, shortness of breath, nausea, vomiting, headache, dizziness, narcosis, unconsciousness, cardiac depression or coma. May also cause symptoms of lack of oxygen leading to collapse and possible death. Extremely high vapor concentrations may cause lung damage. Some individuals may develop asthma. Repeated exposure may cause liver and kidney injury.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

Product Name: TECHNI-HIB 606

Section: 05 HEALTH HAZARD DATA CONTINUED

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in

Product Name: TECHNI-HIB 606

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or

Product Name: TECHNI-HIB 606

Section: 09 SPECIAL PRECAUTIONS CONTINUED

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other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 25%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in

Product Name: TECHNI-HIB 606

Section: 10 REGULATORY INFORMATION CONTINUED

pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000
ammonium bisulfite	10192-30-0	5000

OSHA Exposure Limits

Component Name

methanol

TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: x

isopropyl alcohol

TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

National Fire Protection Agency

2 Health 3 Fire

0 Reactive ACID Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, corrosive, n.o.s.

Hazard Class: 3 Identification: UN2924

Packaging Group: PG III

Contains: methanol, ammonium bisulfite, isopropyl alcohol

Hazardous Substance RQ: 20000# Emergency Response Guide Number: 29

Labels: Flammable liquid Corrosive

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 701

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 2/03/92
Date Prepared 9/21/93
Version: 0000003

Product Name: TECHNI-HIB 701

Trade Name: Scale/Corrosion Inhibitor

Chemical Description:
Proprietary blend of amines and phosphonates in water

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 15%
isopropyl alcohol	00067-63-0	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 1 Deg.F.
Boiling Point, 760 mm Hg: appx 200 Deg.F
Specific Gravity(H2O=1) : 1.000 Solubility in water: Complete
Appearance and Odor: Clear, amber liquid; slight alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 93 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-HIB 701

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness, swelling, and blurred vision.

Skin Irritation: may produce skin irritation, defatting, and dermatitis. Exposure to this material can result in absorption through skin causing health hazard.

Inhalation: overexposure may cause nasal and respiratory irritation, coughing, shortness of breath, dizziness, narcosis, nausea, loss of appetite, lack of coordination, weakness, fatigue, headache, giddiness, sleeplessness, intoxication, unconsciousness, cardiac depression, collapse, coma and death.

Ingestion: can cause gastrointestinal irritation, acidosis, nausea, vomiting, diarrhea, ocular toxicity ranging from diminished visual capacity to complete blindness, collapse, coma and death.

Chronic Overexposure: may cause liver abnormalities, kidney damage, eye damage, lung damage, brain damage, and nervous system damage.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an

Product Name: TECHNI-HIB 701

Section: 05 HEALTH HAZARD DATA CONTINUED

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unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA

Product Name: TECHNI-HIB 701

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-HIB 765

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 3/27/92
Date Prepared 9/21/93
Version: 0000003

Product Name: TECHNI-HIB 765

Trade Name: Scale Inhibitor

Chemical Description:
Proprietary blend of aminophosphates in water

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 15%

Section: 03 PHYSICAL DATA

Freezing Point: - 1 Deg.F.
Boiling Point, 760 mm Hg: appx 200 Deg.F
Specific Gravity(H2O=1) : 1.029 Solubility in water: Soluble
Appearance and Odor: Clear, amber liquid; alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 103 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is combustible and under certain conditions may release vapors that pose a severe fire hazard. These vapors may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static

Product Name: TECHNI-HIB 765

Section: 06 REACTIVITY DATA CONTINUED

and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Product Name: TECHNI-HIB 765

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Product Name: TECHNI-HIB 765

Section: 10 REGULATORY INFORMATION CONTINUED

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 15%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name
methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
2 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 33300# Emergency Response Guide Number: 27

Product Name: TECHNI-HIB 765

Section: 10 REGULATORY INFORMATION CONTINUED

Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 793

Section: 01 PRODUCT IDENTIFICATION

WESTERN UNICHEM
P.O. BOX 1499
707 N. LEECH
HOBBS, TX 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/21/93
Date Prepared 1/03/95
Version: 0000004

Product Name: TECHNI-HIB 793

Trade Name: Scale Inhibitor

Chemical Description:
Proprietary blend of organo phosphorous compounds

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	000067-56-1	< 15%

Section: 03 PHYSICAL DATA

Freezing Point: - 1 Deg.F. pH: 6 - 7
Boiling Point, 760 mm Hg: 212 Deg.F
Specific Gravity(H2O=1) : 1.052 Solubility in water: Complete
Appearance and Odor: Clear, yellow liquid; slight alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 98 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling

Product Name: TECHNI-HIB 793

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness, swelling, and blurred vision.

Skin Irritation: may produce skin irritation, defatting, and dermatitis.

Skin Absorption: exposure to this material can result in absorption through skin causing health hazard.

Inhalation: overexposure may cause coughing, shortness of breath, lightheadedness, dizziness, intoxication and collapse. Can cause nasal and respiratory irritation, weakness, fatigue, headache, and possible unconsciousness and death.

Ingestion: may cause gastrointestinal irritation, acidosis, nausea, vomiting, diarrhea, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Chronic Overexposure: may cause liver abnormalities, kidney damage, eye damage, lung damage, brain damage, and nervous system damage.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Product Name: TECHNI-HIB 793

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid
None known.

Incompatibility (Materials to Avoid)
Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products
Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid
None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled
Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method
Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection
If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Product Name: TECHNI-HIB 793

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable

Product Name: TECHNI-HIB 793

Section: 10 REGULATORY INFORMATION CONTINUED

Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	000067-56-1	< 15%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	000067-56-1	5000

OSHA Exposure Limits

Component Name

methanol

TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 325.0 Skin: X

National Fire Protection Agency

2 Health	3 Fire
0 Reactive	____ Other

Product Name: TECHNI-HIB 793

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 33333# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product, or components if product is a mixture, is/are listed on the Toxic Substance Control Act (TSCA) inventory.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While WESTERN UNICHEM believes that the above data is correct, WESTERN UNICHEM expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-SOLV 158

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 1/07/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-SOLV 158

Trade Name: Paraffin Solvent

Chemical Description:
Proprietary blend of nonionic dispersants in xylene.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
xylene	01330-20-7	< 96%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: 137 Deg.F
Specific Gravity(H2O=1) : 0.876 Solubility in water: Insoluble
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 78 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-SOLV 158

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: liquid and mist will cause severe irritation, redness, tearing, and blurred vision.

Skin Contact: prolonged or repeated contact may cause moderate irritation, defatting, dermatitis.

Inhalation: vapors and mists irritate mucous membranes. Inhalation of higher concentrations may cause dizziness, weakness, fatigue, headaches, nausea, vomiting, and coma. Inhalation of very high concentrations or prolonged exposure may cause unconsciousness or death.

Ingestion: can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. If vomiting occurs spontaneously, do not allow vomitus to be breathed into the lungs as even a small quantity in the lungs may result in chemical pneumonitis and pulmonary edema/hemorrhage.

Chronic effects of exposure: prolonged or repeated exposure to high concentrations may cause neural dysfunction.

Medical conditions generally aggravated by exposure: pre-existing eye, skin and respiratory disorders.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an

Product Name: TECHNI-SOLV 158

Section: 05 HEALTH HAZARD DATA CONTINUED

unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator

Product Name: TECHNI-SOLV 158

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-SOLV 158

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	01330-20-7	< 96%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000

OSHA Exposure Limits

Component Name

xylene

TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

Product Name: TECHNI-SOLV 158

Section: 10 REGULATORY INFORMATION CONTINUED

National Fire Protection Agency

2 Health	3 Fire
0 Reactive	____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene
Hazardous Substance RQ: 1000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-SOLV 159

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 6/13/86
Date Prepared 11/03/93
Version: 0000002

Product Name: TECHNI-SOLV 159

Trade Name: Paraffin Solvent

Chemical Description:
Proprietary blend of solvents and surfactants.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
xylene	001330-20-7	< 95%
ethyl benzene	000100-41-4	< 35%
isopropyl alcohol	000067-63-0	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.890 Solubility in water: Dispersible
Appearance and Odor: Clear, yellow liquid; solvent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 78 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other

Product Name: TECHNI-SOLV 159

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: can cause severe irritation, intense stinging and burning, redness, tearing and blurred vision. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation, dryness, defatting and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, dizziness, weakness, fatigue, and mild narcosis. Inhalation of high concentrations or prolonged exposure may cause vomiting, convulsions, unconsciousness, coma or death. Inhalation or aspiration into the lungs may result in lipoid pneumonitis.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, diarrhea, bleeding, CNS depression, hemolysis, and pulmonary damage. If vomiting occurs spontaneously, do not allow vomitus to be breathed into the lungs as even a small quantity in the lungs may result in chemical pneumonitis and pulmonary edema or hemorrhage. Can be fatal.

Chronic Effects of Exposure: prolonged or repeated exposure to high concentrations may cause neural dysfunction. Can do damage to liver and kidneys.

Medical Conditions Aggravated by Exposure: preexisting eye, skin and respiratory disorders.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

Section: 05 HEALTH HAZARD DATA CONTINUED

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower .

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	001330-20-7	< 95%
ethyl benzene	000100-41-4	< 35%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	001330-20-7	1000
ethyl benzene	000100-41-4	1000

OSHA Exposure Limits

Component Name

Product Name: TECHNI-SOLV 159

Section: 10 REGULATORY INFORMATION CONTINUED

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0
ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0
isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, ethyl benzene, isopropyl alcohol
Hazardous Substance RQ: 1053# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-SOLV 164

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 2/25/92
Date Prepared 9/21/93
Version: 0000003

Product Name: TECHNI-SOLV 164

Trade Name: Paraffin solvent

Chemical Description:
Proprietary blend of dispersants in solvent

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
xylene	01330-20-7	< 93%
ethyl benzene	00100-41-4	< 35%
isopropyl alcohol	00067-63-0	< 10%
diisobutyl ketone	00108-83-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: appx 190 Deg.F
Specific Gravity(H2O=1) : 0.864 Solubility in water: Insoluble
Appearance and Odor: Slightly yellow liquid, hydrocarbon odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 60 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and

Product Name: TECHNI-SOLV 164

Section: 05 HEALTH HAZARD DATA CONTINUED

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in

Product Name: TECHNI-SOLV 164

Section: 09 SPECIAL PRECAUTIONS CONTINUED

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other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	01330-20-7	< 93%
ethyl benzene	00100-41-4	< 35%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable

Product Name: TECHNI-SOLV 175

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 6/12/92
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-SOLV 175

Trade Name: Paraffin Solvent

Chemical Description:
Proprietary blend of surfactants, dispersants and solvents.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
aromatic hydrocarbon solvent	64741-68-0	< 55%
trimethyl benzenes	25551-13-7	< 15%
2-butoxyethanol	00111-76-2	< 15%
xylene	01330-20-7	< 10%
cumene	00098-82-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.940 Solubility in water: Dispersible
Appearance and Odor: Clear, yellow liquid; solvent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 105 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is combustible and under certain conditions may release vapors that pose a severe fire hazard. These

Product Name: TECHNI-SOLV 175

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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vapors may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Containers may explode from internal pressure if confined to a fire. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: can cause irritation, pain, severe excess reddening and swelling of the conjunctiva, and possible chemical burns which is likely to lead to impairment or loss of vision.

Skin Contact: brief contact may cause irritation. Prolonged contact, as from clothing wet with the chemical, may cause more severe irritation and dermatitis. Penetrates skin readily. Frequent or widespread contact may result in the absorption of potentially harmful amounts, with possible injury to kidneys, liver, blood and/or bone marrow.

Inhalation: high concentrations are irritating to eyes and respiratory tract and may cause chest discomfort and coughing. May cause CNS depression including headache, weakness, fatigue, nausea, vomiting, dizziness, drowsiness, and possible unconsciousness or death.

Ingestion: may cause throat and stomach burning sensation. May cause intoxication characterized by abdominal discomfort, headache, nausea, vomiting, diarrhea, weakness, lethargy, incoordination, dizziness, drowsiness, mental confusion, possibly slurred speech and stupor depending on the quantity of material ingested. Possible pneumonia if vomited.

Chronic Exposure: repeated overexposure may result in dermatitis, damage to the blood, liver abnormalities, kidney damage, spleen damage and testis damage.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if

Product Name: TECHNI-SOLV 175

Section: 05 HEALTH HAZARD DATA CONTINUED

not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component

Product Name: TECHNI-SOLV 175

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-SOLV 175

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
2-butoxyethanol	00111-76-2	< 15%
xylene	01330-20-7	< 10%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

Product Name: TECHNI-SOLV 175

Section: 10 REGULATORY INFORMATION CONTINUED

trimethyl benzenes
TWA ppm: 25.0 TWA MG/M3: 125.0
2-butoxyethanol
TWA ppm: 25.0 TWA MG/M3: 120.0 Skin: X
xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0
cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
2 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, trimethyl benzenes
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-SPERSE 253

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 6/12/92
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-SPERSE 253

Trade Name: Paraffin Chemical

Chemical Description:
Proprietary blend of surfactants

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 35%

Section: 03 PHYSICAL DATA

Freezing Point: - 32 Deg.F.
Specific Gravity(H2O=1) : 0.950 Solubility in water: Soluble
Appearance and Odor: Slightly milky liquid; alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 84 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum

Product Name: TECHNI-SPERSE 253

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

(even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause moderate irritation, including burning sensation, tearing, redness, swelling and blurred vision.

Skin Irritation: may produce skin irritation, defatting and dermatitis. Exposure to this material can result in absorption through skin causing health hazard.

Inhalation: can cause nasal and respiratory irritation, weakness, fatigue, headache, and possible unconsciousness and even death. Overexposure may cause coughing, shortness of breath, dizziness, intoxication and collapse.

Ingestion: can cause gastrointestinal irritation, acidosis, nausea, vomiting, lethargy, diarrhea, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Chronic Overexposure: can cause liver abnormalities, kidney damage, eye damage, lung damage, brain damage and nervous system damage.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-SPERSE 253

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid
None known.

Incompatibility (Materials to Avoid)
Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products
Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid
None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled
Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method
Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection
If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation
The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-SPERSE 253

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-SPERSE 253

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 35%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000

OSHA Exposure Limits

Component Name
methanol
TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 310.0 Skin: X

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.

Product Name: TECHNI-SPERSE 253

Section: 10 REGULATORY INFORMATION CONTINUED

Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: methanol
Hazardous Substance RQ: 14300# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-SOLV 272

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 10/14/93
Date Prepared 2/18/94
Version: 0000002

Product Name: TECHNI-SOLV 272

Trade Name: Paraffin solvent

Chemical Description:
Proprietary blend of solvents and dispersants

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
octane	00111-65-9	< 40%
heptane	00142-82-5	< 35%
toluene	00108-88-3	< 20%
naphthalene	00091-20-3	< 10%
methylcyclohexane	00108-87-2	< 5%
cyclohexane	00110-82-7	< 5%
isopropyl alcohol	00067-63-0	< 5%
diisobutyl ketone	00108-83-8	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: < - 40 Deg.F.
Specific Gravity(H2O=1) : 0.750 Solubility in water: Insoluble
Appearance and Odor: Clear yellow liquid, aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 24 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Product Name: TECHNI-SOLV 272

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye contact: can cause severe irritation, stinging, redness, tearing, blurred vision, swelling, conjunctiva irritation, burning, and may cause eye damage.

Skin contact & absorption: can cause irritation, defatting, and dermatitis. Prolonged or repeated contact may cause redness, burning, and drying and cracking of the skin. Contact may result in skin absorption. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

Ingestion: can cause throat and stomach burning sensation, gastrointestinal irritation, nausea, vomiting, diarrhea, bleeding, CNS depression, hemolysis, and pulmonary damage. Can be fatal. This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Inhalation: excessive inhalation of vapors can cause nasal and respiratory irritation, central nervous system effects including dizziness, loss of coordination, drowsiness, mild narcosis, weakness, fatigue, nausea, headache, possible unconsciousness, and even death. Respiratory symptoms associated with pre-existing lung disorders (e.g., asthma-like conditions) may be aggravated by exposure to this material.

Signs and symptoms of chronic exposure are similar to those of acute exposure.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at

Product Name: TECHNI-SOLV 272

Section: 05 HEALTH HAZARD DATA CONTINUED

least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Smoke, carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Product Name: TECHNI-SOLV 272

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with

Product Name: TECHNI-SOLV 272

Section: 09 SPECIAL PRECAUTIONS CONTINUED

adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
toluene	00108-88-3	< 20%
naphthalene	00091-20-3	< 10%
cyclohexane	00110-82-7	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable

Product Name: TECHNI-SOLV 272

Section: 10 REGULATORY INFORMATION CONTINUED

quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
toluene	00108-88-3	1000
naphthalene	00091-20-3	100
cyclohexane	00110-82-7	1000

OSHA Exposure Limits

Component Name

octane
TWA ppm: 300.0 TWA MG/M3: 1450.0 STEL ppm: 375.0 STEL MG/M3: 1800.0

heptane
TWA ppm: 400.0 TWA MG/M3: 1600.0 STEL ppm: 500.0 STEL MG/M3: 2000.0

toluene
TWA ppm: 100.0 TWA MG/M3: 375.0 STEL ppm: 150.0 STEL MG/M3: 560.0
Ceiling ppm: 300.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

methylcyclohexane
TWA ppm: 400.0 TWA MG/M3: 1600.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

diisobutyl ketone
TWA ppm: 25.0 TWA MG/M3: 150.0

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, toluene, cyclohexane
Hazardous Substance RQ: 1000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

Product Name: TECHNI-WET 425

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 9/05/91
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-WET 425

Trade Name: Surfactant

Chemical Description:
Proprietary blend of organic phosphate compounds.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
isopropyl alcohol	00067-63-0	< 30%
2-ethyl hexanol	00104-76-7	< 10%
2-butoxyethanol	00111-76-2	< 10%
phosphoric acid	07664-38-2	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 5 Deg.F.
Specific Gravity(H2O=1) : 0.970 Solubility in water: Soluble
Appearance and Odor: Clear liquid; pungent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 84 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

Treat as an extremely flammable liquid. This material is highly volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and

Product Name: TECHNI-WET 425

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause corneal injury. Vapors may also irritate the eyes.

Skin Contact: brief contact may cause irritation. Prolonged contact, as from clothing wet with the chemical, may cause more severe irritation. Prolonged or repeated contact can result defatting and drying the skin which may result in dermatitis. Penetrates skin readily. Frequent or widespread contact may result in the absorption of potentially harmful amounts, with possible injury to kidneys, liver, blood and/or bone marrow. May cause allergic skin reaction.

Inhalation: vapors may cause mild irritation of the eyes, nose, and throat. High concentrations or prolonged exposures may cause headache, nausea, giddiness, mild narcosis, vomiting, and dizziness. Can cause unconsciousness. May cause pulmonary edema.

Ingestion: may cause burning of the gastrointestinal tract, headache, nausea, vomiting, weakness, bleeding, CNS depression, hemolysis, and pulmonary damage. Can be fatal.

Chronic overexposure: Repeated overexposure may result in damage to the blood.

Conditions Aggravated by Exposure: pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

Additional Information: 2-ethylhexanol has been reported to be teratogenic (to cause birth defects) in laboratory rats when administered orally to pregnant Wistar rats. Subsequent studies have shown not to cause birth defects in rats when administered by inhalation or dermally. It is believed that occupational exposure by inhalation or dermal route poses no significant threat to the embryo/fetus. Selected for NTP carcinogenesis studies. April 1990.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and

Product Name: TECHNI-WET 425

Section: 05 HEALTH HAZARD DATA CONTINUED

launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with oxidizers or alkaline materials.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.

Product Name: TECHNI-WET 425

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Product Name: TECHNI-WET 425

Section: 09 SPECIAL PRECAUTIONS CONTINUED

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
2-butoxyethanol	00111-76-2	< 10%

Product Name: TECHNI-WET 425

Section: 10 REGULATORY INFORMATION CONTINUED

phosphoric acid	07664-38-2	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
phosphoric acid	07664-38-2	5000

OSHA Exposure Limits

Component Name

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

2-butoxyethanol
TWA ppm: 25.0 TWA MG/M3: 120.0 Skin: x

phosphoric acid
TWA MG/M3: 1.0 STEL MG/M3: 3.0

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ACID Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, corrosive, n.o.s.
Hazard Class: 3 Identification: UN2924
Packaging Group: PG III
Contains: isopropyl alcohol, phosphoric acid, 2-ethyl hexanol
Hazardous Substance RQ: 100000# Emergency Response Guide Number: 29
Labels: Flammable liquid Corrosive

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-WET 430

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 8/16/93
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-WET 430

Trade Name: Surfactant

Chemical Description:
Proprietary blend of anionic surfactants in water and alcohol

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Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
methanol	00067-56-1	< 25%
phosphoric acid	07664-38-2	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Specific Gravity(H2O=1) : 0.990 Solubility in water: Complete
Appearance and Odor: Clear, yellow liquid; alcoholic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 83 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling

Product Name: TECHNI-WET 430

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause irritation, including burning sensation, tearing, redness, swelling and blurred vision.

Skin Contact: may produce skin irritation, defatting and dermatitis. Exposure to this material can result in absorption through skin causing health hazard.

Inhalation: can cause nasal and respiratory irritation, coughing, shortness of breath, dizziness, weakness, fatigue, headache, intoxication, collapse, unconsciousness, pulmonary edema and death.

Ingestion: can cause gastrointestinal irritation, acidosis, nausea, vomiting, diarrhea, ocular toxicity ranging from diminished visual capacity to complete blindness, and death.

Chronic Overexposure: can cause liver abnormalities, kidney damage, eye damage, lung damage, brain damage and nervous system damage.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Product Name: TECHNI-WET 430

Section: 06 REACTIVITY DATA CONTINUED

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with oxidizers or alkaline materials.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended

Product Name: TECHNI-WET 430

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the

Product Name: TECHNI-WET 430

Section: 10 REGULATORY INFORMATION CONTINUED

regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
methanol	00067-56-1	< 25%
phosphoric acid	07664-38-2	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
methanol	00067-56-1	5000
phosphoric acid	07664-38-2	5000

OSHA Exposure Limits

Component Name

methanol

TWA ppm: 200.0 TWA MG/M3: 260.0 STEL ppm: 250.0 STEL MG/M3: 325.0 Skin: X

phosphoric acid

TWA MG/M3: 1.0 STEL MG/M3: 3.0

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
ACID Other

Product Name: TECHNI-WET 430

Section: 10 REGULATORY INFORMATION CONTINUED

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, corrosive, n.o.s.
Hazard Class: 3 Identification: UN2924
Packaging Group: PG III
Contains: methanol, phosphoric acid
Hazardous Substance RQ: 20000# Emergency Response Guide Number: 29
Labels: Flammable liquid Corrosive

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TS-4603 Iron Control Activator

Section: 01 PRODUCT IDENTIFICATION

WESTERN UNICHEM
P.O. BOX 1499
707 N. LEECH
HOBBS, TX 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 11/01/93
Date Prepared 11/11/94
Version: 0000005

Product Name: TS-4603 Iron Control Activator

Chemical Description:
Proprietary blend of inorganic additives.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
copper sulfate	007758-99-8	< 25%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
pH: 3.5 - 4.5
Specific Gravity(H2O=1) : 1.150
Solubility in water: Complete
Appearance and Odor: Clear, blue liquid; no odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): WILL NOT FLASH

Extinguishing Media

This material is non-combustible. If this material is involved in a fire, use an extinguishing agent appropriate to surrounding materials. Water spray may be used to cool containers of this material exposed to a fire. Fire extinguishing materials should be collected for determination of proper disposal.

Special Fire Fighting Procedures

Fire fighters should wear self-contained breathing apparatus with a full facepiece operated in the pressure-demand or positive-pressure mode.

Unusual Fire and Explosion Hazards

None

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: may cause irritation.
Skin Contact: may cause irritation.
Inhalation: not expected to pose a hazard. Mists may cause

Product Name: TS-4603 Iron Control Activator

Section: 05 HEALTH HAZARD DATA CONTINUED

irritation of upper respiratory tract and mucous membranes.
Ingestion: may cause nausea, vomiting, diarrhea and gastrointestinal pain.
Chronic Effects: can cause blood damage.
Target Organs: eyes, skin, blood.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

INGESTION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Strong reducing agents, strong oxidizing agents, magnesium.

Hazardous Decomposition Products

Oxides of sulfur.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Product Name: TS-4603 Iron Control Activator

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled material with sand or earth. Recovered undamaged or minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

No respiratory protection should be necessary if good hygiene practices are strictly followed.

Ventilation

No special ventilation is needed. Good hygienic practices should be followed.

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist.

Other Precautions

Containers of this material may be hazardous when emptied.

Product Name: TS-4603 Iron Control Activator

Section: 09 SPECIAL PRECAUTIONS CONTINUED

Since emptied containers retain residues (vapor, liquid, or solid), all hazard precautions given in this data sheet must be observed. Do not transfer to improperly marked container. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should not be washed out or used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard _ Sudden Release of Pressure _ Fire
X Chronic Health Hazard _ Reactive

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
copper sulfate	007758-99-8	< 25%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable

Product Name: TS-4603 Iron Control Activator

Section: 10 REGULATORY INFORMATION CONTINUED

quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
copper sulfate	007758-99-8	10

OSHA Exposure Limits

Component Name
copper sulfate
TWA MG/M3: 1.0

National Fire Protection Agency

1 Health
0 Reactive
0 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Environmentally hazardous substance, liquid,n.o.s.
Hazard Class: 9 Identification: UN3082
Packaging Group: PG III
Contains: proprietary hazardous substance
Hazardous Substance RQ: 40# Emergency Response Guide Number: 31
Labels: Class 9

Toxic Substances Control Act (TSCA), 40 CFR 261

This product, or components if product is a mixture, is/are listed on the Toxic Substance Control Act (TSCA) inventory.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While WESTERN UNICHEM believes that the above data is correct, WESTERN UNICHEM expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

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END OF MSDS

Product Name: TS-4800 Iron Control

Section: 01 PRODUCT IDENTIFICATION

WESTERN UNICHEM
P.O. BOX 1499
707 N. LEECH
HOBBS, TX 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 11/01/93
Date Prepared 11/11/94
Version: 0000004

Product Name: TS-4800 Iron Control

Chemical Description:
Proprietary blend of organic additives.

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
proprietary organic acid		< 60%
acetic acid, glacial	00064-19-7	< 10%

Section: 03 PHYSICAL DATA

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pH: N/A
Specific Gravity(H2O=1) : 1.164 Solubility in water: Complete
Appearance and Odor: Clear, yellow liquid; pungent odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 110 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is combustible and under certain conditions may release vapors that pose a severe fire hazard. These vapors may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Containers may explode from

Product Name: TS-4800 Iron Control

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

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internal pressure if confined to a fire. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: brief contact of the vapors are severely irritating. Brief contact with the liquid or mists will severely damage the eyes and prolonged contact will cause eye injury which may be followed by blindness.

Skin Contact: vapors, liquid and mists are extremely corrosive. Vapors will severely irritate the skin and liquid and mists will severely burn the skin. Prolonged liquid contact will burn or destroy surrounding tissue and death may accompany burns which extend over large portions of the body. May be absorbed through the skin which is toxic.

Inhalation: vapors and mists are extremely corrosive to the nose, throat and mucous membranes. Bronchitis, pulmonary edema and chemical pneumonitis may occur. Irritation, coughing, weakness, chest pain and difficulty in breathing may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage. May cause olfactory paralysis. Breathing high concentrations may result in convulsions or death.

Ingestion: vapors, mists, and liquid are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting and collapse. Swallowing large quantities can cause death.

Chronic Effects of Exposure: may cause erosion of the teeth, lesions on the skin, bronchial irritation, coughing and pneumonia.

Medical Conditions Generally Aggravated by Exposure: persons with preexisting skin disorders, eye problems or respiratory problems may be more susceptible to the effects of this product.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Product Name: TS-4800 Iron Control

Section: 05 HEALTH HAZARD DATA CONTINUED

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid strong oxidizing agents. Contact with mineral acids causes decomposition with release of poisonous hydrogen sulfide. May attack some forms of plastic, rubber and coatings. May be incompatible with acetaldehyde, 5-azidotetrazole, 2-aminoethanol, ammonium nitrate, bromine trifluoride, chromic acid, chlorine trifluoride, chloro-sulfonic acid, dially-methyl carbinol + ozone, ethylene-diamine, hydrogen peroxide, sodium peroxide, potassium hydroxide, sodium hydroxide, potassium permanganate, nitric acid + acetone, oleum, perchloric acid, phosphorus trichloride, potassium t-butoxide, phosphorus isocyanate, and n-xylene. May attack metals to release hydrogen gas.

Hazardous Decomposition Products

Oxides of carbon or sulfur.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill

Product Name: TS-4800 Iron Control

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved supplied air respirator is advised in absence of proper environmental controls. OSHA regulations permit other NIOSH/MSHA approved respirators (negative pressure combination organic vapor/acid gas cartridge type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposures.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas

Product Name: TS-4800 Iron Control

Section: 09 SPECIAL PRECAUTIONS CONTINUED

away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Product Name: TS-4800 Iron Control

Section: 10 REGULATORY INFORMATION CONTINUED

Component Name	CAS #	% Range
NONE		

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
acetic acid, glacial	00064-19-7	5000

OSHA Exposure Limits

Component Name

proprietary organic acid
TWA ppm: 1.0 TWA MG/M3: 4.0 Skin: X

acetic acid, glacial
TWA ppm: 10.0 TWA MG/M3: 25.0

National Fire Protection Agency

2 Health
0 Reactive
2 Fire
ACID Other

Department of Transportation Shipping Information

Proper Shipping Name: Corrosive liquids, flammable, n.o.s.
Hazard Class: 8 Identification: UN2920
Packaging Group: PG II
Contains: acetic acid, organic acid
Hazardous Substance RQ: 50000# Emergency Response Guide Number: 60
Labels: Corrosive Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product, or components if product is a mixture, is/are listed on the Toxic Substance Control Act (TSCA) inventory.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While WESTERN UNICHEM believes that the above data is correct, WESTERN UNICHEM expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-HIB 3051

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 3/03/92
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-HIB 3051

Trade Name: Corrosion Inhibitor

Chemical Description:
Proprietary blend of neutralized amines in aromatic solvent

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
trimethyl benzenes	25551-13-7	< 25%
xylene	01330-20-7	< 10%
cumene	00098-82-8	< 10%
isopropyl alcohol	00067-63-0	< 10%

Section: 03 PHYSICAL DATA

Freezing Point: < - 40 Deg.F.
Boiling Point, 760 mm Hg: appx 290 Deg.F
Specific Gravity(H2O=1) : 0.873 Solubility in water: Insoluble
Appearance and Odor: Clear, amber liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 85 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and

Product Name: TECHNI-HIB 3051

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning, redness, tearing and blurred vision. If not promptly removed, may cause eye damage.

Skin Contact: repeated or prolonged contact with the skin may cause irritation, defatting and dermatitis.

Inhalation: vapors may cause mild irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, dizziness, drowsiness, weakness, fatigue, mild narcosis, possible unconsciousness, and even asphyxiation.

Ingestion: may cause burning of the gastrointestinal tract, nausea, vomiting, diarrhea, bleeding, CNS depression, hemolysis, and pulmonary damage. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally. Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Product Name: TECHNI-HIB 3051

Section: 05 HEALTH HAZARD DATA CONTINUED

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA

Product Name: TECHNI-HIB 3051

Section: 08 SPECIAL PROTECTIVE INFORMATION CONTINUED

regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Product Name: TECHNI-HIB 3051

Section: 10 REGULATORY INFORMATION CONTINUED

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard	_ Sudden Release of Pressure	X Fire
X Chronic Health Hazard	_ Reactive	

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
xylene	01330-20-7	< 10%
cumene	00098-82-8	< 10%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
xylene	01330-20-7	1000
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

Product Name: TECHNI-HIB 3051

Section: 10 REGULATORY INFORMATION CONTINUED

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trimethyl benzenes
TWA ppm: 25.0 TWA MG/M3: 125.0
xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0
cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X
isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

National Fire Protection Agency

2 Health 3 Fire
0 Reactive ____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG III
Contains: xylene, trimethyl benzenes
Hazardous Substance RQ: 10000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

- -

END OF MSDS

Product Name: TECHNI-BREAK 5916

Section: 01 PRODUCT IDENTIFICATION

UNICHEM INTERNATIONAL INC.
P.O. BOX 1499
707 N. LEECH
HOBBS, NM 88241-1499

Emergency Telephone 505-393-7751
Previous Version Date 3/02/92
Date Prepared 9/21/93
Version: 0000002

Product Name: TECHNI-BREAK 5916

Trade Name: Emulsion breaker

Chemical Description:
Proprietary blend of nonionic surfactants in aromatic solvent

Section: 02 HAZARDOUS INGREDIENTS

Component Name	CAS#	% Range
heavy aromatic distillate	67891-79-6	< 80%
4,7-methano-1H-indene, octahydro	06004-38-2	< 40%
ethyl benzene	00100-41-4	< 15%
2-methylstyrene	00611-15-4	< 15%
ethyl toluene	25550-14-5	< 10%
isopropyl alcohol	00067-63-0	< 10%
bicycloheptane,2-methyl-3(1-methyl ethyenyl)isomer	62337-89-7	< 5%
n-propyl benzene	00103-65-1	< 5%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%
1,2,3,4-tetrahydronaphthalene (tetralin)	00119-64-2	< 5%
2-ethyl-bicyclo-(2,2,1)-heptane	02146-41-0	< 5%
bicycloheptane, 2-butylidene	62211-86-3	< 5%
petroleum solvent		< 5%
petroleum distillate	64742-06-9	< 5%

Section: 03 PHYSICAL DATA

Freezing Point: - 40 Deg.F.
Boiling Point, 760 mm Hg: appx 300 Deg.F
Specific Gravity(H2O=1) : 0.928 Solubility in water: Insoluble
Appearance and Odor: Clear, yellow liquid; aromatic odor.

Section: 04 FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method): 67 Deg.F TCC

Extinguishing Media

CO2, dry chemical, water spray or fog, or foam. Use water to keep containers cool. Isolate "fuel" supply from fire. Contain fire fighting liquids for proper disposal.

Product Name: TECHNI-BREAK 5916

Section: 04 FIRE AND EXPLOSION HAZARD DATA CONTINUED

Special Fire Fighting Procedures

Do not enter confined fire space without proper personal protective equipment including NIOSH approved self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode. Do not inject a solid stream of water or foam into hot, burning pools; this may cause splattering and increase fire intensity. Evacuate personnel to a safe area. Keep unnecessary people away.

Unusual Fire and Explosion Hazards

This material is volatile and readily gives off vapors that may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electrical motors, static discharge, or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Containers may explode from internal pressure if confined to fire. Keep containers cool. Keep unnecessary people away.

Section: 05 HEALTH HAZARD DATA

Effects of Overexposure

Eye Contact: the liquid is irritating to the eyes and produces intense stinging and burning. If not promptly removed, may cause eye damage.

Skin Contact: can cause moderate irritation including pain or a feeling of heat, discoloration, swelling and blistering. Repeated or prolonged contact with the skin may cause irritation and dermatitis.

Inhalation: vapors may cause irritation of the eyes, nose, and throat. Prolonged exposures may cause nausea, headache, mild narcosis, dizziness, lightheadedness, loss of appetite, weakness and loss of coordination. Can cause pulmonary edema and bronchial emphysema.

Ingestion: can cause burning of the gastrointestinal tract, nausea, vomiting, bleeding, CNS depression, hemolysis, and pulmonary damage. If aspirated into the lungs, can cause severe injury to the lungs and death.

Emergency and First Aid Procedures

SKIN

Wash with soap and water. Remove contaminated clothing and launder contaminated clothing before reuse. Get medical attention if redness or irritation develops.

EYES

Flush eyes immediately with large amounts of water for at least 15 minutes. Lift lower and upper lids occasionally.

Product Name: TECHNI-BREAK 5916

Section: 05 HEALTH HAZARD DATA CONTINUED

Get medical attention.

INHALATION

Remove victim to fresh air. Give artificial respiration if not breathing. If breathing is difficult, administer oxygen. Keep person warm, quiet and get medical attention.

INGESTION

Call a physician immediately. Give victim a glass of water. Do NOT induce vomiting unless instructed by a physician or poison control center. Never give anything by mouth to an unconscious person.

Section: 06 REACTIVITY DATA

Stable (Y=Yes/N=No): Y

Stability -- Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidizing agents, strong alkalies, and strong mineral acids.

Hazardous Decomposition Products

Thermal decomposition or combustion may produce smoke, carbon monoxide and carbon dioxide.

Hazardous Polymerization May Occur(Y=Yes/N=No): N

Hazardous Polymerization -- Conditions to Avoid

None

Section: 07 SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled

Eliminate sources of ignition. Persons not wearing suitable personal protective equipment should be excluded from area of spill until clean-up has been completed. Shut off source of spill if possible to do so without hazard. Prevent material from entering sewers or watercourses. Provide adequate ventilation. Contain spilled materials with sand or earth. Recover undamaged and minimally contaminated material for reuse or reclamation. Place all collected material and spill absorbents into DOT approved containers.
Advise authorities. If this product is an EPA hazardous substance (see Section 10), notify the U.S.EPA and/or the National Response Center. Additional notification pursuant to SARA Section 302/304 (40 CFR 355) may also be required.

Product Name: TECHNI-BREAK 5916

Section: 07 SPILL OR LEAK PROCEDURES CONTINUED

Waste Disposal Method

Treatment, storage, transportation and disposal must be in accordance with EPA or State regulations under authority of the Resource Conservation and Recovery Act (40 CFR 260-271).

Section: 08 SPECIAL PROTECTIVE INFORMATION

Respiratory Protection

If workplace exposure limit(s) of product or any component is exceeded, an NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure organic vapor type) under specified conditions. Engineering or administrative controls should be implemented to reduce exposure.

Ventilation

The use of mechanical dilution ventilation is recommended whenever this product is used in confined spaces, is heated above ambient temperatures or is agitated. When applicable, sufficient local ventilation should be provided to maintain employee exposures below safe working limits (TWA's).

Protective Gloves

Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride (PVC)

Eye Protection

Chemical splash goggles or face shield in compliance with OSHA regulations is advised; however OSHA regulations also permits safety glasses under certain conditions. The use of contact lenses is not recommended.

Other Protective Equipment

Eye wash and safety shower

Section: 09 SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Avoid contact with eyes, skin or clothing. Avoid breathing vapors or mist. Keep away from heat, sparks, and open flames and never use a cutting torch on or near container (even empty) or explosion may result. Vapors may travel to areas away from the work site and ignite.

Other Precautions

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Do not transfer to improperly

Product Name: TECHNI-BREAK 5916

Section: 09 SPECIAL PRECAUTIONS CONTINUED

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marked container. Do not use pressure to empty container. Do not cut, heat, weld, or expose containers to flame or other sources of ignition. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Containers should be grounded and bonded to receiving container(s) when being emptied. Containers should not be washed out and used for other purposes.
FOR INDUSTRIAL USE ONLY

Section: 10 REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act Of 1986(SARA) Title III

Section 302/304-Extremely Hazardous Substances (40 CFR 355)

SARA requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). These values are subject to change and the regulations should be consulted to verify current statutory requirements.

Components present in this product at a level which could require reporting under the statute are:

Component Name	RQ	TPQ	% Range
NONE			

Section 311/312 Chemical Inventory Reporting Requirements (40 CFR 370)

The Superfund Amendments and Reauthorization Act (SARA) may require submission of reports (chemical list, MSDS, Tier I & Tier II) to the State Emergency Response Commission, Local Emergency Response Committee and the local fire department. The SARA physical and health hazards related to this product are:

X Acute Health Hazard
X Chronic Health Hazard
_ Sudden Release of Pressure
_ Reactive
X Fire

Section 313-List of Toxic Chemicals (40 CFR 372)

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372). This information should be included in all MSDSs that are copied and distributed for this material.

Component Name	CAS #	% Range
ethyl benzene	00100-41-4	< 15%
xylene	01330-20-7	< 5%
naphthalene	00091-20-3	< 5%
cumene	00098-82-8	< 5%

CERCLA, 40 CFR 261 AND 302

The Comprehensive Environmental Response, Compensation, and

Product Name: TECHNI-BREAK 5916

Section: 10 REGULATORY INFORMATION CONTINUED

Liability Act of 1980 (CERCLA) requires notification of the National Response Center 1-800-424-8802 of any release of a Hazardous Substances equal to or greater than the reportable quantities (RQs) listed in 40CFR 302.4. Values are given in pounds for the component and not the mixture, if applicable. (These values are subject to change and the regulations should be consulted to verify current statutory levels.)

Component Name	CAS #	CERCLA RQ
ethyl benzene	00100-41-4	1000
xylene	01330-20-7	1000
naphthalene	00091-20-3	100
cumene	00098-82-8	5000

OSHA Exposure Limits

Component Name

ethyl benzene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 125.0 STEL MG/M3: 545.0

isopropyl alcohol
TWA ppm: 400.0 TWA MG/M3: 980.0 STEL ppm: 500.0 STEL MG/M3: 1225.0

xylene
TWA ppm: 100.0 TWA MG/M3: 435.0 STEL ppm: 150.0 STEL MG/M3: 655.0

naphthalene
TWA ppm: 10.0 TWA MG/M3: 50.0 STEL ppm: 15.0 STEL MG/M3: 75.0

cumene
TWA ppm: 50.0 TWA MG/M3: 245.0 Skin: X

petroleum solvent
TWA ppm: 100.0

petroleum distillate
TWA ppm: 100.0

National Fire Protection Agency

2 Health
0 Reactive
3 Fire
____ Other

Department of Transportation Shipping Information

Proper Shipping Name: Flammable liquids, n.o.s.
Hazard Class: 3 Identification: UN1993
Packaging Group: PG II
Contains: naphthalene, ethyl benzene, xylene
Hazardous Substance RQ: 2000# Emergency Response Guide Number: 27
Labels: Flammable liquid

Toxic Substances Control Act (TSCA), 40 CFR 261

This product (or components if product is a mixture) is in compliance with TSCA.

- -

Section 10 information is to remain attached to the material safety data sheet for this product.

- -

While UNICHEM INTERNATIONAL believes that the above data is

Product Name: TECHNI-BREAK 5916

Section: 10 REGULATORY INFORMATION CONTINUED

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correct, UNICHEM INTERNATIONAL expressly disclaims liability for any loss or injury arising out of the use of this information or the use of any materials designated.

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END OF MSDS

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1337

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
Unichem International	505-393-7751

ADDRESS (Number, Street, City, State, and ZIP Code)
P. O. Box 1499, 707 North Leech Street, Hobbs, New Mexico 88240

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Proprietary Corrosion Inhibitor Blend	KETONE L-2
CHEMICAL FAMILY: Organic Polymers and Phosphates	FORMULA:

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	SPECIFIC GRAVITY (H_2O=1)	1.068
VAPOR PRESSURE (mm Hg.)	--	PERCENT, VOLATILE BY VOLUME (%)	--
VAPOR DENSITY (AIR=1)	--	EVAPORATION RATE (_____ =1)	--
SOLUBILITY IN WATER	Infinite		

APPEARANCE AND ODOR: Light Tan Color

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
None			

EXTINGUISHING MEDIA: Water Spray; CO_2; Foam; Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES:

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Unknown

EFFECTS OF OVEREXPOSURE
Harmful or fatal if ingested. Causes eye irritation if overexposed.

EMERGENCY AND FIRST AID PROCEDURES
If ingested, consult a physician. For eye or skin contact, wash thoroughly with water. If irritation persists, consult a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	None

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS
None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	None

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Wash down affected area with water or soak up with sand or an absorbant material.
Do not allow water runoff to contaminate important water supplies.

WASTE DISPOSAL METHOD
Contact Unichem International for assistance in disposal.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
None required under normal use.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Rubber	EYE PROTECTION Face Shield or goggles

OTHER PROTECTIVE EQUIPMENT
Rubber boots and apron if possibility of contact during use exists.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Do not transfer to an improperly marked container. Keep out of the reach of children.

OTHER PRECAUTIONS

GPO 934-110