

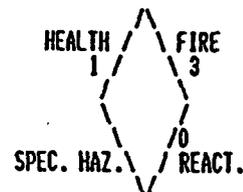
MATERIAL SAFETY DATA SHEET

MSDS NUMBER: 800
 PART NUMBER: H-800-Z
 PRODUCT NAME: ENVIRO-CHEM H-800-Z
 CAS NUMBER: - 0
 CHEMICAL NAME: Zinc Lignosulfonate Solution

SECTION I

MANUFACTURER: Enviro-Chem, Inc.
 ADDRESS: P.O. Box 668
 Hobbs, NM 88241
 EMERGENCY TELEPHONE NUMBER: (505)393-1917
 INFORMATION TELEPHONE NUMBER: (505)397-1917
 DATE PREPARED: 07/11/95

HMIS RATINGS:
 HEALTH: 1
 FIRE: 3
 REACTIVITY: 0
 PERSONAL PROTECTION: J



SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS NUMBER	HAZARDOUS COMPONENT	NTP	SUB- IARC PART/Z	SARA 313	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED PERCENT
67-56-1	Methanol, or Methyl alcohol	?	?	?	Y 200 ppm	200 ppm	55 - 60

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT	160 F.	SPECIFIC GRAVITY (H2O = 1)	1.02644
VAPOR PRESSURE (mm Hg.)	NI	MELTING POINT	NI
VAPOR DENSITY (AIR = 1)	1.105	EVAPORATION RATE (Butyl Acetate = 1)	APPREC.

SOLUBILITY IN WATER: Complete

APPEARANCE AND ODOR: Dark Amber Liquid, Slight Alcohol Odor

OTHER INFORMATION:
 Viscosity Units = NI pH = App. 5.0
 Freezing Point = NI Dry Point =

Density (Lb./Gal.) = 8.54

DANGER
 Physical Hazards:-
 Flammable liquid

Generic Name:- Zinc Lignosulfonate Solution

UN/NA Number:- UN 1993

DOT Response Number:- 29

DOT Proper Shipping Name:- Flammable Liquid, N.O.S.

DOT Hazard Class:- 3

DOT Packing Group:- III

DOT/CERCLA RQ:- 5,000 Lbs. (Methanol)

This product contains chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986. The corresponding CAS numbers and percent by weight are listed above.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 52 F. FLAMMABLE LIMITS: LEL: 6 % UEL: 36 %

EXTINGUISHING MEDIA: Dry chemical, Co2, Alcohol Foam, Sand/Earth, Water Spray, Water Fog.

SPECIAL FIRE FIGHTING PROCEDURES:
 Do not enter fire area without proper protection - see Section V - decomposition products possible.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA (Continued)

Fight fire from safe distance / protected location.

Heat may build pressure / rupture closed containers, spreading fire, increasing risk of burns / injuries.

Use water spray / fog for cooling.

Use water spray to disperse vapors
re-ignition is possible.

Notify authorities if liquid enters sewer / public waters.

UNUSUAL FIRE FIGHTING PROCEDURES:

Releases vapors at normal ambient temperatures. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air, may travel long distances along ground before igniting / flashing back to vapor source.

Vapors may settle and concentrate in low areas.

This material may produce a floating fire hazard in extreme conditions.
Methanol burns with a clean clear flame which is almost invisible in daylight.

SECTION V - REACTIVITY DATA

STABILITY: Stable under normal conditions.

INCOMPATIBILITY (MATERIALS TO AVOID):

Strong Oxidizing Agents, such as Hydrogen Peroxide, Bromine, And Chromic Acid.

Strong Alkalies.

Strong Acids.

Heat, sparks, open flames, and elevated temperatures.

May be corrosive to lead and aluminum.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Formaldehyde and Carbon Monoxide.

HAZARDOUS POLYMERIZATION:

Not expected to occur.

SECTION VI - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY:

Inhalation:-

Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Eye Contact:-

Although no appropriate human or animal health effects data are known to exist, this material is expected to cause eye irritation.

Skin Absorption:-

Although no appropriate human or animal health effects data are known to exist, this material is expected to absorb through the skin.

Skin Irritation:-

Although no appropriate human or animal health effects data are known to exist, this material is expected to be a skin irritant.

Ingestion:-

Although no appropriate human or animal health effects data are known to exist, this material is expected to be an ingestion hazard.

HEALTH HAZARDS (ACUTE AND CHRONIC):

Acute Health Effects:- (Short Term)

Swallowing even small amounts of methanol can cause blindness and death. Other effects may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity. Inhalation of high airborne concentration can also irritate mucous membranes, cause headaches, sleepiness, nausea, confusion, loss of consciousness, digestive and visual disturbances and death. NOTE: The odor threshold of methanol is several times higher than the TLV-TWA. High vapor concentration or liquid contact causes irritation, tearing and burning of the eyes. May be absorbed through the skin in toxic or lethal amounts. Causes mild irritation, redness, cracking and drying of the skin.

Chronic Health Effects:- (Long Term)

Repeated exposure by inhalation or absorption may cause systemic poisoning, brain disorders, impaired vision and blindness. Inhalation may worsen conditions such as emphysema or bronchitis. Repeated skin contact may cause irritation, dryness and cracking.

SECTION VI - HEALTH HAZARD DATA (Continued)

SIGNS AND SYMPTOMS OF EXPOSURE:
NOTES TO PHYSICIAN:

Acute exposure to methanol, either through ingestion or breathing very high airborne concentrations can result in symptoms appearing between 40 minutes and 72 hours. Symptoms and signs are usually limited to the CNS, eyes and gastrointestinal tract. Because of the initial CNS's effects of headache, vertigo, lethargy and confusion, there may be an impression of ethanol intoxication. Blurred vision, decreased acuity and photophobia are common complaints. Treatment with ipecac or lavage is indicated in any patient presenting within two hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate levels are a more accurate measure of severity than serum methanol levels. Treatment protocols are available from most major hospitals and early collaboration with appropriate hospitals is recommended.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
Breathing disorders such as emphysema or bronchitis.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation:-
If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

Eye Contact:-
In case of eye contact, immediately rinse with clean water for 20 to 30 minutes. Retract eyelids often. Obtain emergency medical attention.

Skin Contact:-
Immediately remove contaminated clothing. Wash skin with mild soap and water. Flush with lukewarm water for 15 minutes. If sticky, use waterless cleaner first. Obtain emergency medical attention.

Ingestion:-
Swallowing methanol is life threatening. If conscious and medical aid is not immediately available, dilute stomach contents by giving large amounts of water or milk and induce vomiting. Transport to medical attention immediately.

Emergency Medical Treatment Procedures:-
Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Continue to rinse eyes with clean water for 20 to 30 minutes, retracting eyelids often. Contact ophthalmologist immediately.
Treat burns or allergic reactions conventionally after decontamination.

OTHER HEALTH WARNINGS:
The toxicological and carcinogenic properties of this material have not been fully investigated. Handle accordingly, avoiding contact.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Equip responders with proper protection (see Section VIII).

SMALL SPILL:-
Absorb liquid on paper, vermiculite, floor absorbent, or other absorbent material, and transfer to hood.

LARGE SPILL:-
Provide adequate ventilation. Eliminate all ignition sources (flares, flames (including pilot lights) and electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Use water spray to disperse vapors and protect involved personnel and to reduce flammability. Stop spill at source, dike area ahead of spill to prevent spreading, pump liquid into salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and placed in covered containers, if possible, then labeled for disposal.

Prevent run-off into sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities, as required, that a spill has occurred.

WASTE DISPOSAL METHOD:
Comply with Federal / State / Local regulations for disposal. Contact State and Federal regulators to determine whether the material should be classified as a hazardous waste or industrial waste and handled accordingly. Use licensed transporter and disposal facility.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
For transport, handling, and storage, use polyethylene, plastic, lined steel, or stainless steel.
Store in tightly closed containers in cool, dry, isolated and well ventilated area away from heat, sources of ignition and incompatible materials. Use non-sparking tools and explosion-proof equipment. Ground lines, containers, and other equipment used during transfer to reduce possibility of a static induced spark. Do not "switch" load (load into containers which previously contained gasoline or other low flash material) because of possible accumulation of a static charge resulting in a source of ignition.
Use good personal hygiene practices.
Containers of this material may be hazardous when emptied, since emptied containers retain product residues (vapor, liquid, and/or solids), all hazard precautions given in the data sheet must be observed.
Store drums with bungs closed in upright position.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE (Continued)

OTHER PRECAUTIONS:

Wash thoroughly after handling.
Do not get in eyes, on skin or clothing.
Do not breathe dust, vapor, mist, or gas.
Keep container closed when not in use.
Empty container may contain hazardous residues.

SECTION VIII - CONTROL MEASURES

VENTILATION REQUIREMENTS:

Either local exhaust or general room ventilation is usually required.

PERSONAL PROTECTIVE EQUIPMENT:

Respiratory Protection:-

If exposure can exceed the PEL/TLV, use only NIOSH/MSHA approved air-purifying or supplied air respirator operated in a positive pressure mode per the NIOSH/OSHA 1981 Occupational Health Guidelines for chemical hazard.

Eye Protection:-

Eye protection, including both chemical splash goggles and face shield when possibility exists for eye contact due to spraying liquid or airborne particles. Contact lenses must not be worn.

Skin Protection:-

Impervious protective suit with gloves, boots, and full head and face protection must be worn. The equipment must be cleaned thoroughly after each use.

Other Hygienic Practices:-

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Shower after work using plenty of soap and water.

Other Work Practices:-

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Promptly remove soiled clothing / wash thoroughly before reuse.

SECTION IX - ADDITIONAL INFORMATION

ADDITIONAL MANUFACTURER WARNINGS:

For Industrial Use Only.
Keep out of reach of children.
Failure to use caution may cause serious injury or illness.
Never siphon by mouth.

OTHER PRECAUTIONS AND COMMENTS:

Disclaimers:-

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness or results to be obtained from the use thereof.

The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of, or in any way connected with the handling, storage, use, or disposal of the product.

This MSDS was prepared, and is to be used, only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

This MSDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1200).

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: NM H-800
 PART NUMBER: NM H-800
 PRODUCT NAME: H-800 Hydrogen Sulfide Scavenger
 CAS NUMBER: 108-01-0
 CHEMICAL NAME: PolyAlkylAmine

SECTION I

MANUFACTURER: / VENDOR: Nova Mud

ADDRESS: PO Box 2073
 Hobbs, NM 88240

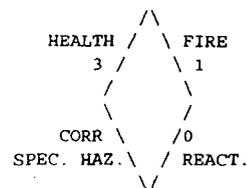
EMERGENCY TELEPHONE NUMBER: (800)530-8786

INFORMATION TELEPHONE NUMBER: (800)530-8786

DATE PREPARED: 01/01/99

HMIS RATINGS:

HEALTH: 3
 FIRE: 1
 REACTIVITY: 0
 PERSONAL PROTECTION:



SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS NUMBER	HAZARDOUS COMPONENT	SUB- SARA			OSHA PEL	ACGIH TLV	OTHER LIMITS	
		NTP	IARC	PART/Z				RECOMMENDED PERCENT
108-01-0	Polyalkylamines, n.o.s.	?	?	?	N	N/D	N/D	Propriet.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT	212 °F.	SPECIFIC GRAVITY (H2O = 1)	0.98150
VAPOR PRESSURE (mm Hg.)	NI	MELTING POINT	NI
VAPOR DENSITY (AIR = 1)	1.2	EVAPORATION RATE (Butyl Acetate = 1)	NI

SOLUBILITY IN WATER: Complete

APPEARANCE AND ODOR: Clear to light amber, no odor

OTHER INFORMATION:

Viscosity Units = No Data Available pH = 9.0 to 10.0
 Freezing Point = 10 F. Dry Point = N/D

Density (Lb./Gal.) = 8.146

DANGER

Physical Hazards:-
 Corrosive Liquid

Generic Name:- PolyAlkylAmine

UN/NA Number:- UN 2735

North American Emergency Response Guide Number:- 153

DOT Proper Shipping Name:- POLYAMINES, Liquid, Corrosive, n.o.s.

DOT Hazard Class:- 8

DOT Packing Group:- III

DOT/CERCLA RQ:- N/App.

This product contains chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986. The corresponding CAS numbers and percent by weight are listed above.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: >200 °F. FLAMMABLE LIMITS: LEL: NI UEL: NI

EXTINGUISHING MEDIA:

Dry Chemical
 CO2
 Water Spray
 Water Fog

SECTION IV - FIRE AND EXPLOSION HAZARD DATA (Continued)

SPECIAL FIRE FIGHTING PROCEDURES:

Do not enter fire area without proper protection - see section V - decomposition products possible.

Fight fire from safe distance / protected location.

Heat may build pressure / rupture closed containers, spreading fire, increasing risk of burns / injuries.

May become combustible upon loss of aqueous carrier.

Use water spray / fog for cooling.

Notify authorities if liquid enters sewer / public waters.

UNUSUAL FIRE FIGHTING PROCEDURES:

NI

SECTION V - REACTIVITY DATA

STABILITY:

Stable under normal conditions.

INCOMPATIBILITY (MATERIALS TO AVOID):

Strong Oxidizing agents, such as Hydrogen Peroxide, Bromine, and Chromic Acid.

Strong Acids.

Strong Alkalies.

Heat, sparks, open flames, and elevated temperatures.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Incomplete combustion may release poisonous carbon monoxide, carbon dioxide, and oxides and/or compounds of nitrogen.

HAZARDOUS POLYMERIZATION:

Not expected to occur under normal conditions.

SECTION VI - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY:

Skin Irritation:- Primary Route

May produce skin irritation, blistering, ulcers, and deep scarring.

Eye Contact:-

Corrosive to the eyes. May produce corneal damage.

Inhalation:-

Hot vapors may be corrosive to the respiratory tract.

Ingestion:-

May cause severe damage to digestive tract.

HEALTH HAZARDS (ACUTE AND CHRONIC):

Acute Health Effects:- (Short Term)

Corrosive to Eyes.

Corrosive to Skin. May cause corneal damage.

Severe Ingestion Hazard.

Hot Vapors may be corrosive to respiratory tract.

No data on Skin Absorption Found.

SIGNS AND SYMPTOMS OF EXPOSURE:

Skin Contact:-

- Irritation or redness of the skin may develop after exposure.

Eye Contact:-

- Severe eye irritation may develop on exposure.

Ingestion:- (Swallowing)

- Abdominal and back pain.

- Leg Cramps.

- Gastrointestinal irritation (Nausea, Vomiting, Diarrhea)

- Shortness of breath.

- Central nervous system depression (Dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness).

- Blurred vision.

- Visual impairment (Including blindness)

- Cyanosis (Characterized by bluish discoloration of the skin and nails). This may aggravate any pre-existing condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease, or anemias.

- Coma.

SECTION VI - HEALTH HAZARD DATA (Continued)

- Death.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Any preexisting dermatitis, pharyngitis, rhinitis, or conjunctivitis may be aggravated by contact with either the vapor or liquid phase.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation:-

If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

Eye Contact:-

In case of eye contact, immediately rinse with clean water for 20 to 30 minutes. Retract eyelids often. Obtain emergency medical attention.

Skin Contact:-

Immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. If sticky, use waterless cleaner first. Obtain emergency medical attention.

Ingestion:-

If large quantity swallowed, give lukewarm water (pint) if victim is completely conscious and alert. Do not induce vomiting, as risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention. Gastric lavage recommended.

Emergency Medical Treatment Procedures:-

Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Continue to rinse eyes with clean water for 20 to 30 minutes, retracting eyelids often. Contact ophthalmologist immediately.

OTHER HEALTH WARNINGS:

The toxicological and carcinogenic properties of this material have not been fully investigated. Handle accordingly, avoiding contact.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Equip responders with proper protection (see section VIII). SMALL SPILL:- Absorb liquid on paper, vermiculite, floor absorbent, or other absorbent material, and transfer to hood.

LARGE SPILL:- Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

Prevent run-off into sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

WASTE DISPOSAL METHOD:

Comply with Federal / State / Local regulations for disposal. Contact state and federal regulators to determine whether the material should be classified as a hazardous waste or industrial waste and handled accordingly. Use licensed transporter and disposal facility.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

For transport, handling, and storage, use polyethylene, plastic, lined steel or stainless steel.

Store in tightly closed containers in cool, dry, isolated and well ventilated area away from heat, sources of ignition and incompatible materials. Use non-sparking tools and explosion proof equipment. Ground lines, containers, and other equipment used during product transfer to reduce the possibility of a static induced spark. Do not "switch" load (load into containers which previously contained gasoline or other low flash material) because of possible accumulation of a static charge resulting in a source of ignition. Use good personal hygiene practices.

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.

Store drums with bungs in up position.

OTHER PRECAUTIONS:

Wash Thoroughly after handling.

Do not get it eyes, on skin, or clothing.

Do not breathe dust, vapor, mist, or gas.

Keep Container closed when not in use.

Empty container may contain hazardous residues.

SECTION VIII - CONTROL MEASURES

VENTILATION REQUIREMENTS:

Either local exhaust or general room ventilation is usually required.

PRODUCT NAME: H-800 Hydrogen Sulfide Scavenger

SECTION VIII - CONTROL MEASURES (Continued)

PERSONAL PROTECTIVE EQUIPMENT:**Respiratory Protection:-**

If exposure can exceed the PEL/TLV, use only NIOSH/MSHA approved air-purifying or supplied air respirator operated in a positive pressure mode per the NIOSH/OSHA 1981 Occupational Health Guidelines for chemical hazard.

Eye Protection:-

Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles. Contact lenses must not be worn.

Skin Protection:-

Impervious protective suit with gloves, boots, and full head and face protection must be worn. The equipment must be cleaned thoroughly after each use.

Other Hygienic Practices:-

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Shower after work using plenty of soap and water.

Other Work Practices:-

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Promptly remove soiled clothing / wash thoroughly before reuse.

SECTION IX - ADDITIONAL INFORMATION

ADDITIONAL MANUFACTURER WARNINGS:

For industrial use only.

Keep out of reach of children.

Failure to use caution may cause serious injury or illness.

Never siphon by mouth.

OTHER PRECAUTIONS AND COMMENTS:**Disclaimers:-**

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself.

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of, or in any way connected with the handling, storage, use, or disposal of the product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

This MSDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1200).
