
5950 North Course Drive, Houston, TX 77072

TRANSPORTATION & MATERIAL SAFETY DATA SHEET

ADE NAME : SODA ASH

HMIS HAZARD RATING : HEALTH

FLAMMABILITY REACTIVITY

PERSONAL PROTECTION

(713) 561-1600 (713) 561-1300 DAY OR NIGHT

EMERGENCY TELEPHONE NUMBER

PREAMBLE

M-1 Drilling fluids, L.L.C. is pleased to furnish this data at your request independent of any sale of the product. While every effort has been made to accurately describe this product and associated manifestations, some of the data are obtained from the open literature, independent laboratory studies, or other sources beyond our direct supervision. We cannot make any assertion as to the reliability or completeness; therefore, the User may rely thereon only at User's risk. We have made no effort to censor nor to conceal deleterious aspects of this product. Since we cannot anticipate or control the many different conditions under which this information and our products may be used, we make no guarantee that the health and safety precautions we have suggested will be adequate for all individuals and/or situations. Likewise, we make no guarantee or warranty of any kind that the use or disposal of this product is in compliance with all federal, state or local laws. It is the obligation of each User of this product to determine and comply with the requirements of all applicable statutes. M-I Drilling Fluids, L.L.C. will furnish, upon request, any additional information to assist the User; however, no warranty, either expressed or implied, nor liability of any nature with respect to the product or to the data herein is made or incurred hereunder.

PRODUCT IDENTIFICATION

COMMON NAME

: Sodium carbonate

CHEMICAL FORMULA: Na2CO3

: 497-19-18

MANUFACTURER

: Manufactured for M-I Drilling Fluids

CAS NUMBER

: Kilogram (pound)

PACKAGE QUANTITY

: 45.4 kg (100 lb) : Drilling fluid additive UNIT OF ISSUE APPLICATION

: Calcium precipitation

FREIGHT DESCRIPTION: Oil well drilling fluid additive

CONTAINER SPECIFICATIONS: Multiwall paper bag meets DOT requirements (49 CFR 178)

2. HAZARDOUS INGREDIENTS

ERIAL OR COMPONENT

(A) OSHA PEL / (B) ACGIH TLV / (C) OTHER LIMITS RECOMMENDED

(B) 10 mg/m 3 (2)

ticulates not otherwise classified

100

(A) 15 mg/m 3 (1)

(PNOC), total dust

PHYSICAL DATA

BOILING POINT (760 mm Hg): N.A.

MELTING POINT

: 851 C 1564 F

(1% Soln.) : 11.4 SPECIFIC GRAVITY (H20=1) : 2.509 VAPOR PRESSURE a 20 deg C

: Nil

VAPOR DENSITY (air=1) : N.A. SOLUBILITY IN WATER @ 20 deg C

: 33.2

PHYSICAL APPEARANCE

: Granules

EVAPORATION RATE (BUTYL ACETATE=1): N.A. FLASH POINT (method used)

: Noncombustible

BULK DENSITY

: 768.9 kg/m3 (48 lb/ft3)

ODOR & COLOR

: Odorless, white color

REACTIVITY DATA

PRODUCT IS STABLE? : Yes PRODUCT DECOMPOSES? : No

PRODUCT POLYMERIZES? : No

INCOMPATIBILITY

OTHER

HEAT

ACID X

(Specify)

N.A.-Not Applicable

<-less Than >-Greater Than

Reacts with hydrated lime to form caustic soda.

C-Ceiling timit

Ite: For additional information and interpretive assistance, see last page.

Page 1 of

5. FIRE AND EXPLOSION HAZARD INFORMATION

AUTO IGNITION TEMPERATURE: N.A. U.E.L.: N.A. FLAMMABLE LIMITS BY AIR, % BY VOL. L.E.L.: N.A. This material is not combustible. When heated to decomposition, oxides of carbon and DOUCTS EVOLVED WHEN SUBsodium may form, producing toxic fumes. CTED TO HEAT BY COMBUSTION HAGUISHING Compatible with agents used to extinguish nearby fires. UNUSUAL FIRE FIGHTING None are required. **PROCEDURES** None known. UNUSUAL FIRE AND **EXPLOSION HAZARDS** HEALTH HAZARD INFORMATION EYE CONTACT: SKIN CONTACT: X SKIN ABSORPTION: INHALATION: X PRIMARY Eyes, skin, respiratory and CARCINOGENICITY -ROUTES OF TARGET gastrointestinal sys. IARC: No OSHA: No ORGAN : NTP: No **EXPOSURE** May cause mechanical irritation to eyes and respiratory tract. Dust inhalation may lead to ACUTE EFFECTS bronchitis, emphysema, and asthma. Dermatitis may result from short contact periods. Ingestion may cause nausea, vomiting and diarrhea.(3) **EXPOSURE** CHRONIC EFFECTS None reported. OF **EXPOSURE** TOXICITY Oral-rat LD50: 4090 g/kg; skin-rabbit: 500 mg/24H MILD; eye-rabbit: 100 mg/24H MODERATE.(3) DATA EMERGENCY AND FIRST AID PROCEDURES Hold eyelids apart and flush eyes with water for at least 15 minutes. Seek medical I EYES attention if irritation persists. SKIN Wash thoroughly with soap and water. Remove contaminated clothing if needed. INGESTION Drink water to dilute. Never give anything by mouth to an unconscious person. Seek medical attention as needed. INHALATION Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. OTHER Sensitive individuals should avoid further contact. Persons seeking medical attention should INSTRUCTIONS carry a copy of this msds with them. OCCUPATIONAL CONTROL MEASURES RESPIRATORY Wear a NIOSH/MSHA-approved particulate respirator when the airborne concentration is above the PEL VENTILATION Supply natural or mechanical ventilation adequate to keep exposures below the recommended exposure limits (see MSDS Section 2). SKIN Wear gloves and long protective clothing. Wash thoroughly after handling. Wash clothing and clean shoes before reuse. EYES Wear chemical safety goggles or glasses with sideguards. Insure proper fit for best protection. OTHER PROTECTIVE Ordinary measures of personal hygiene should be observed. Avoid contact with skin and clothing. EQUIPMENT Avoid breathing dust. SPECIAL PRECAUTIONS **PRECAUTIONARY** CAUTION! May cause eye, skin, and respiratory tract irritation. Ireat as a nuisance dust. PRECAUTIONS FOR TRANSPORTATION Keep dusts to a minimum. Keep container closed. Use with adequate ventilation. See MSDS HANDLING AND STORAGE for proper protective equipment.

D.-Not Determined N.A.-Not Applicable <-Less Than >-Greater Than e: For additional information and interpretive assistance, see last page.

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10. SPILL OR LEAK PROCEDURES

S TO BE TAKEN IF MATERIAL ELEASED OR SPILLED

Wear proper protective equipment (MSDS Section 8). Contain the spill and minimize dust. Re-package or recycle if possible, or place in a suitable waste container. Keep out of sewers and waterways.

HOD

Material is not classified as a hazardous waste by RCRA standards. Dispose of TE DISPOSAL according to state and local regulations dealing with nonhazardous chemical waste.

U.S. GOVERNMENT & OTHER REGULATORY AGENCY CONTROLS

FIRE: REACTIVITY: X SUDDEN RELEASE OF PRESSURE: SARA TITLE III ACUTE: X CHRONIC:

Sodium carbonate is on the Canadian IDL 1% list.

12. TRANSPORTATION INFORMATION

A. DEPARTMENT OF TRANSPORTATION (DOT)

CLASSIFIED AS A HAZARDOUS MATERIAL ACCORDING TO DOT (49 CFR 172): No

PROPER SHIPPING NAME : N.A.

HAZARD CLASS

: N.A.

IDENTIFICATION NO.

: N.A.

LABEL(S) REQUIRED

: N.A.

EXCEPTIONS & PACKAGING REQUIREMENTS (SEE SECTION) : N.A.

MAXIMUM QUANTITY

PASSENGER AIRCRAFT : N.A.

IN ONE PACKAGE CARGO AIRCRAFT : N.A.

B. AIR TRANSPORT REGULATIONS (IATA/ICAO)

PROPER SHIPPING NAME : N.A.

FLASH POINT : N.A. deg F N.A. deg C

HAZARD CLASS : N.A. YTITHAUP MUMI

PASSENGER AIRCRAFT : N.A.

PACKAGING (SEE SECTION) : N.A.

ONE PACKAGE CARGO AIRCRAFT PACKAGING (SEE SECTION): N.A.

INTERNATIONAL MARITIME ORGANIZATION REGULATIONS (IMO)

SUBSTANCE NAME : N.A.

CLASS NO. : N.A.

UN NO.: N.A. PAGE NO. : N.A.

UN NO.: N.A.

HAZARD CLASS LABEL(S)

: N.A.

N.A. deg C

DESCRIPTION

: N.A.

FLASH POINT : N.A. deg F

: Oil well drilling fluid additive (sodium carbonate)

13. ADDITIONAL INFORMATION

References:

(1) Chemical Guide to the OSHA Hazard Communication Standard, Ed. by Clansky, K.B., 7th Edition: Roytech: Burlingame, CA, (1992).

1991-1992 Threshold Limit Values and Biological Exposure Indices; American Conference of (2) Governmental Industrial Hygienists: Cincinnati, (1991).

(3) Sax, N. I. and Lewis, R.J., Sr.: Dangerous Properties of Industrial Materials, 7th Edition, Vols. I-III; VNR: New York, (1989).

FOR ADDITIONAL INFORMATION CONTACT:

Manager, Environmental Affairs (713) 561-1507

Prepared by : James H. Rushing

Date Prepared: Revised: February 1993

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MANUFACTURER

: Manufactured for M-I Drilling Fluids

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UNIT OF ISSUE : Kilogram (pound)

: Drilling fluid additive

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: Calcium precipitation

FREIGHT DESCRIPTION : Oil well drilling fluid additive

CONTAINER SPECIFICATIONS: Multiwall paper bag meets DOT requirements (49 CFR 178)

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RIAL OR COMPONENT

(A) OSHA PEL / (B) ACGIH TLV / (C) OTHER LIMITS RECOMMENDED

ticulates not otherwise classified

(A) 15 mg/m3 (1) 100

(B) 10 mg/m 3 (2)

(PNOC), total dust

PHYSICAL DATA

BOILING POINT (760 mm Hg) : N.A.

MELTING POINT

: 851 C 1564 F

(1% Soln.) : 11.4 SPECIFIC GRAVITY (H20=1) : 2.509 VAPOR PRESSURE @ 20 deg C SOLUBILITY IN WATER @ 20 deg C

VAPOR DENSITY (air=1)

EVAPORATION RATE (BUTYL ACETATE=1): N.A.

PHYSICAL APPEARANCE

: Granules

FLASH POINT (method used)

BASE

: Noncombustible

BULK DENSITY

: 768.9 kg/m3 (48 lb/ft3)

ODOR & COLOR

REACTIVITY DATA

PRODUCT IS STABLE? : Yes PRODUCT DECOMPOSES? : No

PRODUCT POLYMERIZES? : No

HEAT

ACID X

WATER

INCOMPATIBILITY

OTHER

Reacts with hydrated lime to form caustic soda.

(Specify)

N.A.-Not Applicable

<-Less Than

>-Greater Than

C.Ceiling Limit

 $oldsymbol{f}$ te: For additional information and interpretive assistance, see last page.

Page 1 of

5. FIRE AND EXPLOSION HAZARD INFORMATION

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	HEAT BY CO	MBUSTION			y form, producir							
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	RE FIGHTIN	G	N	None are r	required.			, <u>.</u>				
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F		u										
XPOSURE					,,							
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R					n persists.							
S SKI	IN	Wash the	oroughl	ly with so	oap and water.	Remove contaminated	clothing	if need	ed.			
—								·		<u>. </u>		
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T _		attentio	on as r	needed.								
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D		difficu	ilt, giv	ve oxygen	1.							
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-Not Determined N.A.-Not Applicable - <-Less Than >-Greater Than For additional information and interpretive assistance, see last page.

SODA ASH Page 2 of

10. SPILL OR LEAK PROCEDURES

TO BE TAKEN IF MATERIAL EASED OR SPILLED

Wear proper protective equipment (MSDS Section 8). Contain the spill and minimize dust. Re-package or recycle if possible, or place in a suitable waste container. Keep out of sewers and waterways.

TE DISPOSAL

Material is not classified as a hazardous waste by RCRA standards. Dispose of according to state and local regulations dealing with nonhazardous chemical waste.

U.S. GOVERNMENT & OTHER REGULATORY AGENCY CONTROLS

SARA TITLE III ACUTE: X

CHRON1C:

FIRE: REACTIVITY: X

UN NO.: N.A.

UN NO.: N.A.

PAGE NO. : N.A.

Sodium carbonate is on the Canadian IDL 1% list.

12. TRANSPORTATION INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT)

CLASSIFIED AS A HAZARDOUS MATERIAL ACCORDING TO DOT (49 CFR 172): No

PROPER SHIPPING NAME : N.A.

HAZARD CLASS

: N.A.

IDENTIFICATION NO.

: N.A.

LABEL(S) REQUIRED

: N.A.

EXCEPTIONS & PACKAGING REQUIREMENTS (SEE SECTION) : N.A.

MAXIMUM QUANTITY

PASSENGER AIRCRAFT : N.A.

IN ONE PACKAGE

CARGO AIRCRAFT

B. AIR TRANSPORT REGULATIONS (IATA/ICAO)

PROPER SHIPPING NAME : N.A.

FLASH POINT : N.A. deg F N.A. deg C

HAZARD CLASS : N.A. YTITHAUG MUM ONE PACKAGE

PASSENGER AIRCRAFT : N.A. CARGO AIRCRAFT

PACKAGING (SEE SECTION) : N.A.

PACKAGING (SEE SECTION) : N.A.

INTERNATIONAL MARITIME ORGANIZATION REGULATIONS (IMO)

SUBSTANCE NAME : N.A.

LABEL(S)

HAZARD CLASS : N.A.

CLASS NO. : N.A.

: N.A.

FLASH POINT : N.A. deg F

N.A. deg C

: Oil well drilling fluid additive (sodium carbonate)

13. ADDITIONAL INFORMATION

References:

- (1) Chemical Guide to the OSHA Hazard Communication Standard, Ed. by Clansky, K.B., 7th Edition; Roytech: Burlingame, CA, (1992).
- 1991-1992 Threshold Limit Values and Biological Exposure Indices; American Conference of (2) Governmental Industrial Hygienists: Cincinnati, (1991).
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Prepared by : James H. Rushing

Date Prepared: Revised: February 1993

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