MATERIAL SAFETY DATA SHEET
CALCIUM CHLORIDE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: CALCIUM CHLORIDE

CHEMICAL CLASS: Inorganic salts.

APPLICATIONS: Oil well drilling fluid additive. Oil well completion fluid additive. Weighting agent.

EMERGENCY TELEPHONE: 281-561-1600

SUPPLIER: Supplied by a Business Unit of
M-I L.L.C.
P.O. Box 42842, Houston, Texas 77242-2842
See cover sheet for local supplier.

TELEPHONE: 281-561-1509
FAX: 281-561-7240

CONTACT PERSON: Sam Hoskin - Manager, Occupational Health

2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME:	CAS No.:	CONTENTS :	EPA RQ:	TPQ:
Calcium chloride	10043-52-4	60-100 %		

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CAUTION! MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. Avoid contact with eyes, skin and clothing. Avoid breathing airborne product. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

This product is a/an white powder. A nuisance dust. Dike and contain spills. Keep out of sewers and waterways. No significant immediate hazards for emergency response personnel are known.

ACUTE EFFECTS:
HEALTH HAZARDS, GENERAL:

Particulates may cause mechanical irritation to the eyes, nose, throat and lungs. Particulate inhalation may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma. Dermatitis and asthma may result from short contact periods.

INHALATION: Irritating to the respiratory tract if inhaled.

INGESTION: Harmful if swallowed. May cause gastric distress, nausea and vomiting if ingested.

SKIN: Irritating to the skin.

EYES: Irritating to the eyes.

CHRONIC EFFECTS:

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CARCINOGENICITY:
IARC: Not listed. OSHA: Not regulated. NTP: Not listed.

ROUTE OF ENTRY:
Inhalation. Skin and/or eye contact.

TARGET ORGANS:
Respiratory system, lungs. Skin. Eyes.

4. FIRST AID MEASURES

GENERAL: Persons seeking medical attention should carry a copy of this MSDS with them.

INHALATION: Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention.

INGESTION: Drink a couple of glasses water or milk. Do not give victim anything to drink of he is unconscious. Get medical attention.

SKIN: Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues.

EYES: Promptly wash eyes with lots of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5. FIRE FIGHTING MEASURES

FLAMMABILITY LIMIT - LOWER(%): N/D
FLAMMABILITY LIMIT - UPPER(%): N/D

EXTINGUISHING MEDIA:
Use extinguishing media appropriate for surrounding fire. Carbon dioxide (CO_2). Dry chemicals. Foam. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES:
No specific fire fighting procedure given.

UNUSUAL FIRE & EXPLOSION HAZARDS:
No unusual fire or explosion hazards noted.

HAZARDOUS COMBUSTION PRODUCTS:
This material is not combustible. No specific hazardous combustion products noted.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:
Wear proper personal protective equipment (see MSDS Section 8).

SPILL CLEAN-UP PROCEDURES:
Avoid generating and spreading of dust. Shovel into dry containers. Cover and move the containers. Flush the area with water. Do not contaminate drainage or waterways. Repackage or recycle if possible.

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7. HANDLING AND STORAGE

HANDLING PRECAUTIONS:
Avoid handling causing generation of dust. Wear full protective clothing for prolonged exposure and/or high concentrations. Eye wash and emergency shower must be available at the work place. Wash hands often and change clothing when needed. Provide good ventilation. Mechanical ventilation or local exhaust ventilation is required.

STORAGE PRECAUTIONS:
Store at moderate temperatures in dry, well ventilated area. Keep in original container.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

		OSHA PEL:		ACGIH TLV:		OTHER:		
INGREDIENT NAME:	**CAS No.:**	**TWA:**	**STEL:**	**TWA:**	**STEL:**	**TWA:**	**STEL:**	**UNITS:**
Calcium chloride	10043-52-4	5		3				mg/m3 resp.dus

INGREDIENT COMMENTS:
No exposure limits noted for ingredient(s). Exposure limits are for Particulates Not Otherwise Classified (PNOC).

PROTECTIVE EQUIPMENT:

ENGINEERING CONTROLS:
Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to reduce air contamination and keep worker exposure below the applicable limits.

VENTILATION: Supply natural or mechanical ventilation adequate to exhaust airborne product and keep exposures below the applicable limits.

RESPIRATORS: Use at least a NIOSH-approved N95 half-mask disposable or reuseable particulate respirator. In work environments containing oil mist/aerosol use at least a NIOSH-approved P95 half-mask disposable or reuseable particulate respirator.

PROTECTIVE GLOVES:
Use suitable protective gloves if risk of skin contact.

EYE PROTECTION:
Wear dust resistant safety goggles where there is danger of eye contact.

PROTECTIVE CLOTHING:
Wear appropriate clothing to prevent repeated or prolonged skin contact.

HYGIENIC WORK PRACTICES:
Wash promptly with soap and water if skin becomes contaminated. Change work clothing daily if there is any possibility of contamination.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Powder, dust.
COLOR: White.
ODOR: Odorless or no characteristic odor.
SOLUBILITY DESCRIPTION: Very soluble in water.

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SOLUBILITY VALUE (g/100g H2O 68°F):	75	
DENSITY/SPECIFIC GRAVITY (g/ml):	2.2	TEMPERATURE (°F): 68
VAPOR DENSITY (air=1):	N/D	
VAPOR PRESSURE:	N/D	TEMPERATURE (°F):
pH-VALUE, DILUTED SOLUTION:	N/D	CONCENTRATION (%,M):

10. STABILITY AND REACTIVITY

STABILITY: Normally stable.

CONDITIONS TO AVOID:
Avoid contact with water.

HAZARDOUS POLYMERIZATION:
Will not polymerize.

POLYMERIZATION DESCRIPTION:
Not relevant.

MATERIALS TO AVOID:
Sulfuric acid

HAZARDOUS DECOMPOSITION PRODUCTS:
No specific hazardous decomposition products noted.

11. TOXICOLOGICAL INFORMATION

TOXIC DOSE - LD 50: 1000 mg/kg (oral rat)

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:
Contact M-I Environmental Affairs for ecological information.

13. DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT:
This product, should it become a waste, is not hazardous by U.S. RCRA criteria.

DISPOSAL METHODS:
Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted industrial landfill. Ensure that containers are empty by RCRA criteria prior to disposal in a permitted industrial landfill.

14. TRANSPORT INFORMATION

PRODUCT RQ: N/A

U.S. DOT:
U.S. DOT CLASS: Not regulated.

CANADIAN TRANSPORT:
TDGR CLASS: Not regulated.

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SEA TRANSPORT:
IMDG CLASS: Not regulated.

AIR TRANSPORT:
ICAO CLASS: Not regulated.

15. REGULATORY INFORMATION

REGULATORY STATUS OF INGREDIENTS:

NAME:	CAS No:	TSCA:	CERCLA:	SARA 302:	SARA 313:	DSL(CAN):
Calcium chloride	10043-52-4	Yes	No	No	No	Yes

US FEDERAL REGULATIONS:
WASTE CLASSIFICATION: Not a hazardous waste by U.S. RCRA criteria. See Section 13.

REGULATORY STATUS: This Product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):

SECTION 313: This product does not contain toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372.
SARA 311 Categories:
1: Immediate (Acute) Health Effects.

The components of this product are listed on or are exempt from the following international chemical registries:
TSCA (U.S.)
DSL (Canada)
EINECS (Europe)

STATE REGULATIONS:
STATE REGULATORY STATUS: This product or its components, if a mixture, is subject to following regulations (Not meant to be all inclusive - selected regulations represented):.

None.
PROPOSITION 65: This product does not contain chemicals considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required.

CANADIAN REGULATIONS:
LABELS FOR SUPPLY:

REGULATORY STATUS: This Material Safety Data Sheet has been prepared in compilance with the Controled Product Regulations.

Canadian WHMIS Classification: D2B - Other Toxic Effects: Toxic Material

16. OTHER INFORMATION

NPCA HMIS HAZARD INDEX: 1 Slight Hazard
FLAMMABILITY: 0 Minimal Hazard

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REACTIVITY:	1 Slight Hazard
NPCA HMIS PERS. PROTECT. INDEX:	E - Safety Glasses, Gloves, Dust Respirator
USER NOTES:	N/A = Not applicable N/D = Not determined
INFORMATION SOURCES:	OSHA Permissible Exposure Limits, 29 CFR 1910, Subpart Z, Section 1910.1000, Air Contaminants. ACGIH Threshold Limit Values and Biological Exposure Indices for Chemical Substances and Physical Agents (latest edition). Sax's Dangerous Properties of Industrial Materials, 9th ed., Lewis, R.J. Sr., (ed.), VNR, New York, New York, (1997). Product information provided by the commercial vendor(s).
PREPARED BY:	Sam Hoskin
REVISION No./Repl. MSDS of:	1 / September 7, 1995
MSDS STATUS:	Approved.

DATE: August 19, 1998

DISCLAIMER:

MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditiions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.

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