

MATERIAL SAFETY DATA SHEET

Product ID: 12084
Revision Date: 08/16/2002

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: SULFATREAT(R) - 410HP
Chemical Family: Mixture
Product Use: Hydrogen Sulfide Treatment
Emergency Telephone (24 hr.): 281-561-1600

Supplied by a Business Unit of: M-I L.L.C.
5950 North Course Dr.
Houston, TX 77072
Telephone: 281-561-1511
Fax: 281-561-7240
Contact Person: Catherine Miller, Occupational Health

Revision Number: 1

WHMIS Class: D2A D2B
UN PIN No: Not regulated

HMIS Rating

Health: 1* Flammability: 1 Physical Hazard: 0 PPE: E

HMIS Key: 4=Severe, 3=Serious, 2=Moderate, 1=Slight, 0=Minimal Hazard. *Chronic effects - See Section 11. See Section 8 for Personal Protective Equipment recommendations.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS NO:	Wt. %	Ingredient Comments:
Silica, crystalline, quartz	14808-60-7	5 - 10	No comments.
Montmorillonite, calcined	70892-59-0	30 - 60	No comments.
Silica, crystalline, Cristobalite	14464-46-1	1 - 5	No comments.
Iron oxides	Various	10 - 30	No comments.
Water	7732-18-5	10 - 30	No comments.

3. HAZARDS IDENTIFICATION

Emergency Overview: Caution! May cause eye, skin, and respiratory tract irritation. Long term inhalation of particulates may cause lung damage. Cancer hazard. Contains crystalline silica which may cause lung cancer. There is sufficient evidence that inhaled crystalline silica causes cancer in humans. IARC classification group I carcinogen. Risk of cancer depends on duration and level of exposure.

Potential Health Effects:

Acute Effects

Eye Contact: Dust may cause irritation and inflammation.
Skin Contact: Dust may cause skin irritation.
Inhalation: May be irritating to the respiratory tract if inhaled.
Ingestion: Not considered a likely route of exposure. May be harmful if large amounts are swallowed.

Chronic Effects

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Carcinogenicity & Chronic Effects: See Section 11 - Toxicological Information.

Routes of Exposure: Inhalation. Dermal (skin) contact. Eyes.

Target Organs: Eyes. Skin. Respiratory System.

Medical Conditions Aggravated By Exposure: Respiratory and skin conditions.

4. FIRST AID MEASURES

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

Skin Contact: Wash skin thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Get medical attention if any discomfort continues.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Dilute with 2 - 3 glasses of water or milk, if conscious. Never give anything by mouth to an unconscious person. If signs of irritation or toxicity occur seek medical attention.

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

Notes To Physician: None known.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: F (C) Not applicable

Flash Point Method: Not applicable

Flammable Limits in Air - Lower (%): Not applicable

Flammable Limits in Air - Upper (%): Not applicable

Autoignition Temperature: F(C) Not applicable

Autoignition Temperature: °C Not applicable

Flammability Class: Not combustible

Other Flammable Properties: Not determined.

Extinguishing Media: Use extinguishing media appropriate for surrounding fire. This material is not combustible.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures: Do not enter fire area without proper personal protective equipment, including NIOSH/MSHA approved self-contained breathing apparatus. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Manage water run-off in accordance with local, state and federal environmental regulations.

Hazardous Combustion Products: Metal fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment identified in Section 8.

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Spill Procedures: Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.

Environmental Precautions: Waste must be disposed of in accordance with federal, state and local laws. Manage any release of product into sewers, surface/subsurface waters in accordance with local, state and federal environmental regulations.

7. HANDLING AND STORAGE

Handling: Put on appropriate personal protective equipment. Avoid contact with skin and eyes. Avoid generating or breathing dust. Use only in a well ventilated area. Wash thoroughly after handling.

Storage: Keep container closed. Store away from incompatibles.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Ingredient	CAS NO:	Wt. %	ACGIH TLV TWA	OSHA PEL TWA	Other	Notes
Silica, crystalline, quartz	14808-60-7	5 - 10	0.05 mg/m ³	see Table Z-3		(R)
Montmorillonite, calcined	70892-59-0	30 - 60	Not Listed	Not Listed		(1)
Silica, crystalline, Cristobalite	14464-46-1	1 - 5	0.05 mg/m ³	see Table Z-3		(R)
Iron oxides	Various	10 - 30	5 mg/m ³ , as Fe	15 mg/m ³ (Total); 5 mg/m ³ (Respirable), as Fe		None
Water	7732-18-5	10 - 30	Not Listed	Not Listed		None

Notes:

(1) Control as an ACGIH particulate not otherwise specified (PNOS): 10 mg/m³ (Inhalable); 3 mg/m³ (Respirable) and an OSHA particulate not otherwise regulated (PNOR): 15 mg/m³ (Total); 5 mg/m³ (Respirable).

(R) Respirable fraction (ACGIH);

Table Z-3: PEL for Mineral Dusts containing crystalline silica are 10 mg/m³ / (%SiO₂+2) for quartz and 1/2 the calculated quartz value for cristobalite and tridymite.

An independent study conducted for SulfaTreat, a Business Unit of M-I L.L.C., concluded that workers, who manufacture SulfaTreat products, were not exposed to levels of crystalline silica that exceeded the permissible exposure limit (PEL) and the Threshold Limit Value (TLV) established by OSHA and ACGIH, respectively, for this substance. These manufacturing operations included drying; loading, unloading and mixing of raw materials; final product bagging and general housekeeping activities. Both the PEL and TLV represent the time weighted average concentration for an 8 hour workday and 40 hour workweek, to which it is believed that workers may be repeatedly exposed, day after day, without adverse effect.

Engineering Controls: Use appropriate engineering controls such as, exhaust ventilation and process enclosure, to ensure air contamination and keep workers exposure below the applicable limits.

Personal Protection Equipment

Eye/Face Protection: Dust resistant safety goggles.

Skin Protection: If needed to minimize irritation: Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear chemical resistant gloves such as nitrile or neoprene.

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Respiratory Protection: If exposed to airborne particulates: Use at least a NIOSH-approved N95 half-mask disposable or reuseable particulate respirator (dusk mask).

General Hygiene Considerations: Work clothes should be washed separately at the end of each work day. Disposable clothing should be discarded, if contaminated with product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Black
Odor: Odorless
Physical State: Granular Solid
pH: Not determined.
Vapor Pressure: Not applicable
Vapor Density (Air=1): Not determined
Boiling Point: Not determined
Melting/Freezing Point: Not determined
Solubility Description: In water
Solubility: Negligible
Density/Specific Gravity: 62 lb/ft³ (1.0 g/cc)
Evaporation Rate: Not applicable
Odor Threshold Lower: Not determined
Odor Threshold Upper: Not determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Not determined.
Materials to Avoid: Strong acids. Strong oxidizers.
Hazardous Decomposition Products: None known
Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Component Toxicological Data

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Ingredient	Component Toxicological Summary
Silica, crystalline, quartz	Crystalline silica is the most widely occurring of all minerals. The most common form of silica is sand. One form of crystalline silica, respirable crystalline silica (RCS), is known to be a human carcinogen. This finding is based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in exposed workers (International Agency for Research on Cancer (IARC), 1997)). According to IARC, the overall relative risk associated risk of developing cancer due to exposure to RCS is 1.3 to 1.5. This risk may be influenced by level and length of exposure. The National Toxicology Program (NTP) classifies crystalline silica as "reasonably anticipated to cause cancer in humans" (6th Annual Report on Carcinogens, 1991). Long term inhalation of crystalline silica can also result in the lung disease, silicosis. Symptoms of this disease include coughing and shortness of breath. (NJ HSFS, January 1996)
Montmorillonite, calcined	Prolonged and repeated inhalation of particulate may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma.
Iron oxides	Chronic exposure to this component may cause a benign pneumoconiosis (irritation caused by dust inhalation which may lead to fibrosis (formation of fibrous tissue)). (NIOSH, HazardText) Prolonged and repeated inhalation of particulate may lead to pulmonary fibrosis, chronic bronchitis, emphysema and bronchial asthma.

Product Toxicological Information:

Product oral LD50 is >3990 mg/kg (rat) (highest practical test level).

12. ECOLOGICAL INFORMATION

Component Ecotoxicity Data

Ingredient	CAS NO:	Data
Silica, crystalline, quartz	14808-60-7	Not determined
Montmorillonite, calcined	70892-59-0	Not determined
Silica, crystalline, Cristobalite	14464-46-1	Not determined
Iron oxides	Various	Not determined
Water	7732-18-5	Not applicable

Product Ecotoxicity Data

Product Data: Contact M-I Environmental Affairs Department for ecotoxicity information.

Chemical Fate Data

Biodegradation: Not determined

Bioaccumulation: Not determined

Octanol/Water Partition Coefficient: Not determined

13. DISPOSAL CONSIDERATIONS

Waste Classification: Not determined.

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Waste Management:

Under RCRA, it is the responsibility of the user to determine at the time of disposal, whether the product meets RCRA criteria for the hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting materials hazardous. Empty container retain residues. All labeled precautions must be observed.

Disposal Method:

Recover and reclaim or recycle, if practical. Should this product become a waste, dispose of in a permitted landfill.

14. TRANSPORT INFORMATION

U.S. DOT

Shipping Description: Not regulated

TDG (Canada):

UN PIN No: Not regulated

IMDG:

ICAO/IATA:

15. REGULATORY INFORMATION

US Regulations

SARA 311/312:

SARA 311/312 Hazard Categories: Delayed (chronic) health hazard;

Ingredient	SARA 313	CERCLA	SARA 302 / TPQs	CA 65 Cancer	CA 65 Dev. Tox.	CA 65 Repro. F	CA 65 Repro. M
Silica, crystalline, quartz	Not Listed	Not Listed	Not Listed	carcinogen (airborne particles of respirable size); initial date 10/1/88	Not Listed	Not Listed	Not Listed
Montmorillonite, calcined	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Silica, crystalline, Cristobalite	Not Listed	Not Listed	Not Listed	carcinogen (airborne particles of respirable size); initial date 10/1/88	Not Listed	Not Listed	Not Listed
Iron oxides	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Water	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

State Regulations

State Comments: Proposition 65: This product contains chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 to cause cancer and/or reproductive toxicity. See table under US Regulations for the specific chemicals.

International Inventories

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Ingredient	CAS NO:	TSCA	DSL	NDSL	EINECS	AICS
Silica, crystalline, quartz	14808-60-7	Listed	Listed	Not Listed	Listed	Listed
Montmorillonite, calcined	70892-59-0	Listed	Listed	Not Listed	Listed	Listed
Silica, crystalline, Cristobalite	14464-46-1	Listed	Listed	Not Listed	Listed	Listed
Iron oxides	Various	Listed	Listed	Not Listed	Listed	Listed
Water	7732-18-5	Listed	Listed	Not Listed	Listed	Listed

Inventory Comment:

"Listed" indicates the component is listed or exempt from listing on the chemical inventory.

Canadian Regulations

Controlled Products Regulations Statement: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS Class:

D2A D2B

16. OTHER INFORMATION

The following has been revised since the last issue of this MSDS:

Sections 13,

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 can not 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 conditions 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.