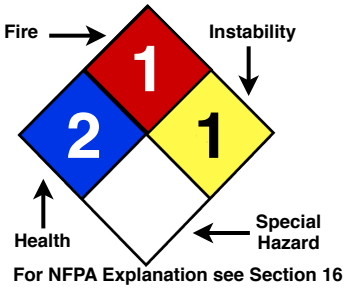
Safety Data Sheet

Martrex, Inc.

Section 1: Chemical Product and Company Information

Product name: Sulfur Molten
Reference Number: n/a
Supplier/ Further Information: **Consumers' Cooperative Refineries Ltd.**
P.O. Box 260
550E 9th Avenue North
Regina, Saskatchewan SAP 3A1 Canada
Phone: (306) 721-5353
EPA Registration Number: n/a
CAS#: 7704-34-9
Chemical Name: Sulphur
Synonyms: Elemental Sulphur; Solid Sulphur; Molten Sulphur; Pelletized Sulphur; Powdered Sulphur; Sulphur; Flower Sulphur; Crushed Bulk Sulphur; Prilled Sulphur
Chemical Family: Non-metallic element
SDS Number: n/a
Revision Date: 12/07/2010



For NFPA Explanation see Section 16

24 Hour Emergency Phone - Chemtrec Transport: 1-800-424-9300; Medical: 1-800-441-3637

Section 2: Hazards Identification

Emergency Overview

DANGER! FLAMMABLE DUST AND SOLID. May be fatal if inhaled. Harmful if swallowed. Causes respiratory tract, eye and skin irritation. Contains material that can cause Target Organ Damage.

GHS Classification:

Flammable Solid	**Category 2** (H228)-(when molten sulfur solidifies)
Combustible Dust	**Category 1** (HCS 2012)
Acute toxicity, oral	**Category 3** (H301)
Acute toxicity, inhalation	**Category 2** (H330)
Skin Corrosion/Irritation	**Category 1** (H314)-(thermal burns)
Skin Corrosion/Irritation	**Category 2** (H315)
Specific target organ toxicity, single exposure, respiratory system	**Category 1** (H370)
Specific target organ toxicity, repeat exposure, respiratory system, skin	**Category 2** (H373)

Additional hazard not resulting in classification:

If heated, care must be taken to avoid injury from thermal burns.
Heating may also release toxic hydrogen sulfide gas.

GHS Label, Hazards and Precautionary Statements

GHS Pictogram:

Label Signal Word: **Danger**

Hazard Statements

Toxic if swallowed. (H301)
Fatal if inhaled. (H330)
Causes severe skin burns and eye damage. (H314)
Causes skin irritation. (H315)
Causes damage to respiratory system. (H370)
May cause damage to respiratory system and skin through prolonged or repeated exposure. ↳(H373)
Flammable solid. (H228)
May form combustible dust concentrations in air. (HCS 2012)

Precautionary Statements

Prevention:

Wash thoroughly after handling. (P264)
Do not eat, drink or smoke when using this product. (P270)
Do not breathe dust/fumes/gas/mist/vapor/spray. (P260)
Use only outdoors or in a well-ventilated area. (P271)
In case of inadequate ventilation, wear appropriate respiratory protection. (P284)
(See Section 8: Exposure Controls / Personal Protection in this document)
Wear protective gloves/protective clothing/eye protection/face protection. (P280)
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
Ground and bond container and receiving equipment. (P240)
Use explosion-proof electrical, ventilating, lighting and other equipment. (P241)

Response:

IF exposed or concerned: Call a **POISON CENTER/doctor**. (P308+311)
Get medical advice or attention If you feel unwell. (P314)
IF SWALLOWED: Rinse mouth. **Do NOT induce vomiting.** (P301+P330+P331)
Immediately call a POISON CENTER / doctor (P310)
Specific Treatment: See **Section 4: First Aid Measures: Ingestion** on this label. (P321)
IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing. (P304+340)
Immediately call a POISON CENTER / doctor. (P310)
Specific Treatment is Urgent: see **Section 4: First Aid Measures: Inhalation** on this label.(P320)
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin and wash with plenty of water [or shower]. (P303+P361+P352+P353)
Take off contaminated clothing and wash it before reuse. (P362+P363+P364)
Specific Treatment see **Section 4: First Aid Measures, Skin Exposure** on this label. (P321)
If skin irritation occurs: Get medical advice / attention. (P332+P313)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
Immediately call a POISON CENTER / doctor (P310)
Specific Treatment: see **Section 4: First Aid Measures: Eye Exposure** on this label. (P321)
In case of fire: Use water spray, fog, or foam to extinguish. (P370+378)
(See additional information in Section 5: Fire Fighting Measures)

Storage:

Store locked up. (P405)
Store in well-ventilated place. P403)
Keep container tightly closed. (P233)

Disposal Considerations:

Dispose of content/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

Physical state: Liquid
Odor: Rotten eggs
Additional Precautions:
Irritating to eyes, respiratory system and skin. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get on skin or clothing. Avoid contact with eyes. Contains

material that can cause target organ damage. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Skin or eye contact with molten material can cause thermal burns and possible permanent eye damage. Hydrogen Sulphide, at increasing levels, will cause eye and respiratory irritation, breathing failure, unconsciousness and death without necessarily any warning odor being sensed.

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

Inhalation: Very toxic by inhalation. Irritating to respiratory system. Inhalation of vapors containing Hydrogen Sulphide or Sulphur Dioxide can be harmful. Hydrogen Sulphide gas may accumulate in storage tanks and bulk transport compartments.

Ingestion: Toxic if swallowed.

Skin contact: May cause skin irritation, especially under repeated or prolonged contact or when moisture is present.

Eye contact: Irritating to eyes. Eye contact with dusts may be irritating and could cause eye injury if not removed promptly. The dust becomes acidic following contact with moisture in the eye and may result in moderate to severe irritation. Vapor may be irritating to eyes.

Potential chronic health effects

Chronic effects: Contains material that can cause target organ damage. Repeated or prolonged contact with dusts may irritate skin, cause dermatitis and lead to allergic reactions. Repeated inhalation exposure to dust may cause bronchitis. Hydrogen Sulphide, at increasing levels, will cause eye and respiratory irritation, breathing failure, unconsciousness and death without necessarily any warning odor being sensed.

Carcinogenicity: There is no data to indicate any component present at greater than 0.1% that may present a carcinogenic risk.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Target organs: Contains material which causes damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS), eye, lens or cornea.

Over-exposure signs/symptoms

Inhalation: Adverse symptoms may include the following: respiratory tract irritation, coughing

Ingestion: No specific data.

Skin: Adverse symptoms may include the following: irritation, redness

Eyes: Adverse symptoms may include the following: pain or irritation, watering, redness

Medical conditions aggravated by exposure: Pre-existing disorders involving any target organs mentioned in this SDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

Section 3: Composition/Information on Ingredients

Hazardous Component	CAS#	%	ACGIH Limits Canadian(US-2007)	OSHA-Vacated PEL'S OSHA-Time Weighted AVE	OTHER Limits
Sulphur	7704-34-9	100%			
Hydrogen Sulphide (H_2S)	7783-06-4	< 0.1	STEL: 21 mg/m3 15 minute(s). TWA: 14 mg/m3 8 hour(s).	= 10 ppm TWA = 14 mg/m^3 TWA = 15 ppm STEL = 21 mg/m^3 STEL	

The temperature of Molten Sulphur will be greater than 110ºC.

NOTE: There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4: First Aid Measures

Eye Exposure: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. **Get medical attention immediately.**

Skin Exposure: Immediately flush with large quantities of water to dissipate heat. If burns have occurred, cool area (unless burns are third degree - open wound). Treat for shock if necessary. A thin crust of sulfur may remain on the skin after material cools. Crust should not be removed except by a physician (it provides a sterile shield for injured area). Do not attempt to remove sulfur-impregnated clothing as it may adhere to flesh. **Get medical attention immediately.**

Inhalation: Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. **Get medical attention immediately.**

Ingestion: **DO NOT INDUCE VOMITING.** If victim is alert and not convulsing, rinse mouth and give 1⁄2 to 1 glass of water to dilute material. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Never give anything by mouth to an unconscious person. **Immediately Get Medical Attention.** Vomiting may need to be induced but should be directed by a physician or a poison control center. Keep person warm and at rest. **IMMEDIATELY transport victim to an emergency facility.**

Protection of First-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

NOTE TO THE PHYSICIAN: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5: Fire Fighting Measures

NFPA rating:

Health: 2 **Flammability:** 1 **Instability:** 1 **Other:** -

Flash Point: Closed cup: 207°C (404.6°F)

Autoignition Temperature: 232°C (449.6°F)

Flammable limits in air - lower (%): 3.3% (Hydrogen Sulfide)

Flammable limits in air - upper (%): 46% (Hydrogen Sulfide)

Flammability of the product: Easily ignitable, combustible solid.

Dust or vapors forms explosive mixtures with air. The temperature of Molten Sulphur will be greater than 110C. If Hydrogen sulfide is present, the flammable limits can range from 4.3 to 45.5% and may cause ignition more readily. Burns with a blue flame that may be difficult to see in daylight.

Extinguishing media:

Suitable: Small fires may be smothered by covering with inert material such as dirt/sand or use portable dry chemical extinguisher. For larger fires, use water spray or steam.

Not suitable: Do not spray water directly into containers due to the danger of slop over. Avoid straight streams which may scatter molten sulphur and dust.

Special Exposure Hazard: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products: At higher temperatures, Sulphur will react with hydrocarbons giving off Hydrogen sulphide. Oxides of sulphur (such as Sulphur dioxide), Hydrogen sulphide.

Special Protective Equipment for Fire Fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

See Section 8: Exposure Controls / Personal Protection

Special remarks on explosion hazards: Avoid splashing when loading as this can accumulate a static charge resulting in a spark igniting an explosion or fire.

Section 6: Accidental Release Measures

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up:

Small spill: Eliminate all ignition sources. Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Clean up spill creating as little dust as possible. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Clean up spill creating as little dust as possible. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Environmental and Regulatory Reporting: See Sections 12, 13 and 15

Section 7: Handling and Storage

Handling: Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Dust Explosion Hazard: Material may accumulate static. Static charge build up may become an ignition source. Transfer product using proper grounding and bonding procedures to avoid static accumulation. The vapor space over molten sulphur in enclosed tanks, tank cars or other confined concentrations of toxic and flammable hydrogen sulphide gas which can be readily lethal and which form an explosive mixture with air. Exercise caution and wear a positive pressure air mask when opening and closing a hatch. Use non-ferries tools to reduce sparking.

Storage: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Closed tanks or pits should be vented to the atmosphere using stream jacketed vent lines.

Section 8: Exposure Controls / Personal Protection

Exposure Limits

Product Name	Canada Exposure Limits ACGIH TLV (United States, 1/2007)	OSHA -Vacated PEL"S OSHA -Time Weighted AVE
Hydrogen Sulphide	STEL: 21 mg/m3 15 minute(s). TWA: 14 mg/m3 8 hour(s).	= 10 ppm TWA = 14:14 MG/m3 TWA = 15 ppm STEL = 21:21 MG/m3 STEL

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide mechanical ventilation for confined spaces. Lab samples should be handled with adequate ventilation (under a fume hood if necessary). Use with explosion-proof and corrosion resistant equipment.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes: Splash goggles. Face shield.

Skin: Wear chemical resistant clothing if prolonged skin contact is likely. If contact with molten material is possible, wear thermal and chemical resistant clothing.

Respiratory: Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits. If safe exposure limits are exceeded wear an air-supplied respirator (SCBA) or air line respirator equipped with escape bottle.

Hands: Thermal and chemical resistant gloves.

Personal Protective Equipment:

Personal protective equipment (Pictograms)

HMIS Code/Personal Protective Equipment: G

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9: Physical and Chemical Properties

Chemical Name: Sulphur, Molten

Physical State: Liquid

Flash Point: Closed cup: 207°C (404.6°F)

Autoignition Temperature: 232°C (449.6°F)

Flammable limits in air - lower (%): 3.3% (Hydrogen Sulfide)

Flammable limits in air - upper (%): 46% (Hydrogen Sulfide)

Color: Yellow-Orange

Odor: Slight Hydrocarbon Rotten-egg.

Boiling/condensation Point (5-95%): 445°C (833°F)

Melting/freezing Point: 110°C (230°F)

Specific Gravity: 2.07

Vapor Pressure: 0.015 kPa (0.11 mm Hg) at 140ºC (284ºF)

Vapor Density: 8.9 [Air = 1]

Volatility: 0.02% (v/v)

VOC: 0

Solubility: Very slightly soluble in the following materials: cold water and hot water.

Section 10: Stability and Reactivity

Stability: The product is stable at 70°F, 760 mm pressure. At higher temperatures, sulphur will react with hydrocarbons giving off hydrogen sulphide.

Hazardous Polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur. At higher temperatures, sulphur will react with hydrocarbons giving off hydrogen sulphide

Conditions to Avoid: Avoid splash loading as this can accumulate a static charge resulting in a spark igniting an explosion or fire.

Reactivity/Materials to Avoid: Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis. Sulfur is incompatible with a number of chemical materials including, but not limited to, chlorates, nitrates, other oxidizers, carbides, halogens, potassium, phosphorus, and heavy metals. This incompatibility may result in fire, excessive heat generation, uncontrolled reaction, release of toxic products and/or explosion.

Hazardous decomposition products: Oxides of sulphur (such as Sulphur dioxide), Hydrogen sulphide. Other possibly toxic reaction or decomposition products are highly dependent on the incompatible material.

Conditions of Reactivity to Avoid: Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Highly flammable in the presence of the following materials or conditions: heat.

Section 11: Toxicological Information

Acute toxicity:

Product Name	CAS Number	Species	Dose	Results	Exposure
Sulphur	7704-34-9	Rat	>8437 mg/kg	LD Oral	-

Inhalation: Very toxic by inhalation. Irritating to respiratory system. Inhalation of vapors containing Hydrogen Sulphide or Sulphur Dioxide can be harmful. Hydrogen Sulphide gas may accumulate in storage tanks and bulk transport compartments.

Ingestion: Toxic if swallowed.

Skin: May cause skin irritation, especially under repeated or prolonged contact or when moisture is present.

Eyes: Irritating to eyes. Eye contact with dusts may be irritating and could cause eye injury if not removed promptly. The dust becomes acidic following contact with moisture in the eye and may result in moderate to severe irritation. Vapor may be irritating to eyes.

Target Organs: Contains material which causes damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS), eye lens or cornea.

Section 12: Ecological Information

Environmental Effects: No known significant effects or critical hazards.

Aquatic Ecotoxicity:

Product Name	CAS Number	Test	Species	Exposure	Results
Sulphur	7704-34-9	- -	Daphnia Fish	48 hours 96 Hours	Acute EC_{50} >5000 ppm Acute LC_{50} >10000000 ug/L

Product Name	CAS Number	Test	Species	Exposure	Results
Hydrogen Sulphide	7783-06-9	- - -	Crustaceans Fish Fish	48 hours 96 Hours 96 Hours	Acute EC_{50} 540 ug/L Acute LC_{50} 3 ug/L Acute LC_{50} <2 ug/Lug/L

Section 13: Disposal Considerations

Waste Disposal: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by- products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14: Transport Information

AERG: 133

Regulatory Info	UN Number	Proper Shipping Name	Classes	PG*	Label	Additional Info
TDG Classification	UN2448	SULFUR MOLTEN	4.1	III		-
IMDG Class	UN2448	SULFUR MOLTEN	4.1	III		-
IATA-DGR Class	UN2448	SULFUR MOLTEN	4.1	III		-

PG*: Packing Group

US DOT (49 CFR 172.101)

Transport Information:

This material when transported via US commerce would be regulated by DOT Regulations. UN Identification numbers can be used for international and domestic transportation. NA Identification numbers are for domestic transportation only. Note: Solid Sulphur is not subject to DOT regulations when transported in the United States in a non-bulk package or formed to a specific shape (see Specified Provision 30 of DOT Regulation 172.102.)

Proper shipping name:	Sulfur, Molten.....Sulfur
UN/Identification No:	NA 2448.....NA 1350
Hazard Class:	9.....9
Packing group:	III.....III
DOT reportable quantity (lbs):	Not applicable.....Not applicable.
Regulated substances:	Not applicable.....Not applicable.

Section 15: Regulatory Information

Canadian Regulatory Information:

WHMIS (CANADA): Class B-4: Flammable solid

Class D-1A: Material causing immediate and serious toxic effects (Very toxic).

Class D-2B: Material causing other toxic effects (Toxic).

Canadian Lists:

CEPA Toxic substances: None of the components are listed.

Canadian ARET: None of the components are listed.

Canadian NPRI: The following components are listed: Hydrogen sulphide

Alberta Designated Substances: None of the components are listed.

Ontario Designated Substances: None of the components are listed.

Quebec Designated Substances: None of the components are listed.

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations

U.S. Regulations:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Sulphur, Molten	no data
Hydrogen Sulphide	= 500 lb. TPQ

SARA Section 304:

This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Sulphur, Molten	no data
Hydrogen Sulphide	= 100 lb. final RQ = 45.4 kg final RQ

SARA Section 311/312

The following EPA hazard categories apply to this product:

Acute Health Hazard, Extremely Hazardous

SARA Section 313:

This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Sulphur, Molten	none
Hydrogen Sulphide	none

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Sulfur, Molten

Louisiana Right-To-Know: Not Listed

California Proposition 65: Not Listed

New Jersey Right-To-Know:	Listed
Pennsylvania Right-To-Know:	Listed
Massachusetts Right-To Know:	Listed
Florida substance List:	Not Listed
Rhode Island Right-To-Know:	Listed
Michigan critical materials register list:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Hydrogen Sulfide

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	sn 1017
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Extraordinarily hazardous
Florida substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan critical materials register list:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Extraordinarily hazardous

Hydrogen Sulfide (cont.)

California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 1017 TPQ 500 lb.
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597	= 100 lb. RQ air;
- List of Hazardous Substances:	= 100 lb. RQ land/water

International regulations International lists:

This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

Section 16: Other Information

ACGIH - American Conference of Governmental Industrial Hygienists
ANSI - American National Standards Institute
API - American Petroleum Institute
ATSDR - Agency for Toxic Substances and Disease Registry (United States)
CAA - Clean Air Act (United States)
CAS - Chemical Abstracts Service
CEIL - Ceiling Exposure Limit
CERCLA - Comprehensive Environmental Response, Compensation & Liability Act of 1980

CFR - Code of Federal Regulations
CHEMTREC - Chemical Transportation Emergency Center
CPR - Controlled Products Regulations
CWC - Chemical Weapons Convention
DOT - U.S. Department of Transportation
DSL - Canadian Domestic Substance List
EHS - Extremely Hazardous Substance
EINECS - European chemical Substances Information System
EPA - U.S. Environmental Protection Agency
GHS - Globally Harmonized System
HCS - OSHA's Hazard Communication Standard
HMIS - Hazardous Material Identification System
IARC - International Agency for Research on Cancer
IDLH - Immediately dangerous to life or health
IOPC - international Oil Pollution Compensation
LEL - Lower Explosive Limit
NAERG - North American Emergency Response Guidebook
NIOSH - National Institute of Occupational Safety and Health
NFPA - National Fire Protection Association
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit (set by OSHA)
PPE - Personal Protective Equipment
RCRA - Resource Conservation and Recovery Act of 1976
RQ - Reportable Quantity
RTECS - The Registry of Toxic Effects of Chemical Substances
SARA - Superfund Amendments and Reauthorization Act

GHS Pictograms and Hazards

Health Hazard  • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	**Flame**  • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	**Exclamation Mark**  • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder  • Gases Under Pressure	**Corrosion**  • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals	**Exploding Bomb**  • Explosives • Self-Reactives • Organic Peroxides
Flame Over Circle  • Oxidizers	**Environment** (Non-Mandatory)  • Aquatic Toxicity	**Skull and Crossbones**  • Acute Toxicity (fatal or toxic)

NFPA Rating Explanation Guide

Rating Number	Health Hazard	Flammability Hazard	Instability Hazard
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock
2	Can cause temporary incapacitation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures
1	Can cause significant irritation	Must be preheated before ignition can occur	Normally stable. High temperatures make unstable
0	No Hazard	Will not burn	Stable

Rating Symbol	Special Hazard
ALK	Alkaline
ACID	Acidic
BIO	BioHazard
COR	Strong Corrosive
CRYO	Cryogenic
OXY	Oxidizer
	Radioactive
W	Reacts violently or explosively with water
W OX	Reacts violently or explosively with water or oxidizer

This chart for reference only - For complete specifications consult the NFPA Standard

24 Hour Emergency Phone - Chemtrec: 1-800-424-9300 Transportation
1-800-441-3637 Medical

SDS - Safety Data Sheet
STEL - Concentration to which workers can be exposed continuously for a **short** period of time without suffering from irritation, irreversible tissue damage or narcosis of sufficient degree to increase the likelihood of accidental injury, impair self-rescue or materially reduce work efficiency.
TDG (Canadian)**:** Transport of Dangerous Goods Regulations
TLV - Threshold Limit Value (set by ACGIH)
TPQ - Threshold Planning Quantity
TSCA - US Toxic Substance Control Act
TWA - 8-hour Time Weighted Average
WHMIS - Workplace Hazardous Material Information System
UEL - Upper Explosive Limit
UN - United Nations

SDS Issue Date: n/a
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