

Materials Safety and Data Sheet

Martrex, Inc. P.O. Box 1709 Minnetonka, MN 55345-3793

Product: Sulphur Molten

For Chemical Emergencies Call CHEMTREC - Day or Night - at 800-424-9300

N.D. - Not Determined N/A - Not Applicable

6/6/2008

1. CHEMICAL IDENTIFICATION

Chemical Name: Sulphur Molten

Chemical Family: Sulphur

Manufacturer's Name: Consumers' Cooperative Refineries Ltd

Address: P.O. Box 260; 550E 9th Avenue North, Regina, Saskatchewan S4P 3A1

Emergency Telephone No: (306) 721-5222

Emergency Telephone No: MSDS Information: (306) 721-5353

Supplier's Name: Same as manufacturer

Chemical Formula: S8

Molecular Weight: 32

Trade Name/Synonyms: Sulphur; Sulphur Elements

FLAMMABILITY: 1

REACTIVITY: 0

HEALTH (Acute): 2

HEALTH (Chronic): Y

2. HAZARDOUS INGREDIENTS OF MATERIALS

Cas#	Name	Concentration %	Exposure Limits
7704-34-9	Sulphur	100	
7783-06-4	Hydrogen Sulphide (H2S)	< 0.1	(ACGIH) TLV-TWA 10 ppm

3. PHYSICAL DATA FOR MATERIAL

Physical State:	Solid
Odor and Appearance:	Yellow/orange, molten solid; rotten egg odor from H2S
Odor Threshold:	N.D.
Specific Gravity:	2.07 @ room temperature
Vapor Pressure	(mm): 0.11 mm Hg @ 140° C
Vapor Density:	.2278 lbs/ft3
Evaporation Rate:	N.D.
Boiling Point (°C):	445
Freezing/Pour Point (°C):	110-119 (melt pt)
Solubility in Water:	Negligible
% Volatile (by volume):	0
pH:	N/A
Coefficient of water/oil distribution:	N.D.

4. FIRE AND EXPLOSION HAZARD OF MATERIAL

CONDITIONS OF FLAMMABILITY: Easily ignitable, combustible solid. Dust.

MEANS OF EXTINCTION: Small fires may be smothered by covering with inert material such as dirt/sand or use a portable extinguisher. For larger fires, use water spray or steam. Do not spray water directly into containers due to the danger of boil over.

SPECIAL PROCEDURES: Fire fighters should wear self contained breathing apparatus and full protective equipment. The presence of hydrogen sulphide can increase the flammable limit range from 4.3% to 45.5% and may cause ignition more readily. Avoid spraying straight streams which may scatter molten sulphur and dust.

Flashpoint (°C) and Method:	207
Upper explosion Limit (% by volume):	N.D.
Lower explosion Limit (% by volume):	N.D.
Auto Ignition Temperature:	232
Explosion Data - Sensitivity to Mechanical Impact:	N.D.
Explosion Data - Sensitivity to Static Discharge:	Can be ignited by static

5. REACTIVITY DATA

CHEMICAL STABILITY: Stable under normal conditions of storage and use.

INCOMPATIBILITY TO OTHER SUBSTANCES: Oxidizing agents and mineral acids/alkalines.

REACTIVITY AND UNDER WHAT CONDITIONS: At high temperatures, sulphur will react with hydrocarbons giving off hydrogen sulphide. Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION AND COMBUSTION PRODUCTS: Oxides of sulphur (such as sulphur dioxide) and hydrogen sulphide.

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6. TOXICOLOGICAL PROPERTIES OF PRODUCT

ROUTES OF ENTRY: Skin contact, eye contact, inhalation

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: Skin or eye contact with molten material can cause thermal burns and possible permanent eye damage. Eye contact with dusts may be irritating and could cause eye injury if not removed promptly. Vapor may be irritating to eyes. Inhalation of vapors containing Hydrogen Sulphide (H₂S) or Sulphur Dioxide (SO₂) can be harmful. H₂S gas may accumulate in storage tanks and bulk transport containers - see OTHER TOXICITY DATA for more information on H₂S.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: Repeated or prolonged contact with dust may irritate skin, cause dermatitis and lead to allergic reactions. Repeated inhalation exposure to dust may cause bronchitis.

EXPOSURE LIMITS OF PRODUCT: See "Hazardous Ingredients"

OTHER TOXICITY DATA: There is no data to indicate any component present at greater than 0.1% that may present a carcinogenic risk. H₂S, at increasing levels, will cause eye and respiratory irritation, breathing failure, unconsciousness and death without necessarily any warning odor being sensed.

LD50 of Product (Specify Species and Route):	N.D.
Irritancy of Product:	N.D.
Exposure limits of Product:	See "Hazardous Ingredients"
LC50 of Product (Specify Species):	N.D.
Sensitization of Product:	N.D.
Synergistic materials:	N.D.

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7. PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: If contact with molten material is possible, wear thermal and chemical resistant clothing.

GLOVES: Thermal and chemical resistant

EYE PROTECTION: Chemical goggles and face shield

RESPIRATORY: Not normally required if used with adequate ventilation. If adequate ventilation does not exist or if safe exposure limits are exceeded, wear a NIOSH - approved air - supplied respirator.

ENGINEERING CONTROLS: Use with local exhaust ventilation to control vapors and dust below the safe exposure limits. Provide mechanical ventilation of confined spaces. Lab samples should be handled under a fume hood. Use with explosion proof equipment.

LEAK AND SPILL PROCEDURES: Contain. Remove ignition sources. Ventilate area. Wear appropriate protective equipment and a NIOSH - approved respirator. Clean up spill creating as little dust as possible. Notify the appropriate authorities of significant spills.

WASTE DISPOSAL: Dispose of in accordance with federal, provincial and local government regulations. Empty container may contain product residue

HANDLING PROCEDURES AND EQUIPMENT: Do not breath gas, vapor, mist or dust. Where skin contact is unlikely but may occur, wear long sleeves and coveralls in addition to above protective equipment. Prevent any possible contact with skin or eyes. Material may accumulate static. Static charge build-up could become an ignition source. Transfer using proper grounding procedures. Keep away from heat, sparks or flames. Guard against dust/ vapor accumulation.

STORAGE REQUIREMENTS: Closed tanks or pits should be vented to the atmosphere using steam jacketed vent lines.

SPECIAL SHIPPING INFORMATION:

Shipping name: Sulphur, Molten
TDG Class: 4.1
Packing Group: III
Pin #: UN 2448

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8. FIRST AID MEASURES

SKIN: Remove contaminated clothing - launder before reuse. Flush skin with cool water for at least 15 minutes. Do **NOT** remove solidified material. Seek immediate medical attention.

EYE: Immediately flush contaminated eye(s) with running water for at least 15 minutes while occasionally holding eyelids open to ensure thorough flushing. Seek immediate medical attention.

INHALATION: Remove to fresh air. If not breathing, apply artificial respiration. Administer oxygen if breathing is difficult. Seek medical attention.

INGESTION: Do **NOT** induce vomiting. Rinse mouth out. Drink milk or water to dilute stomach contents. Never give anything by mouth if victim is convulsing or losing consciousness. Keep warm and at rest. Seek immediate medical attention.

GENERAL ADVICE: Keep victim warm and at rest. Seek medical attention.

9. PREPARATION OF M.S.D.S.

W.H.M.I.S. CLASSIFICATION: D-1(A); B-4

SOURCES USED: Available upon request

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