1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATHESON TRI-GAS, INC.
150 Allen Road Suite 302
Basking Ridge, New Jersey 07920
Information: 1-800-416-2505

Emergency Contact:
CHEMTREC 1-800-424-9300
Calls Originating Outside the US:
703-527-3887 (Collect Calls Accepted)

SUBSTANCE: DIMETHYL SULFIDE

TRADE NAMES/SYNONYMS:
MTG MSDS 205; METHYL SULFIDE; 2-THIOPROPANE; METHANETHIOMETHANE; DMS; METHYL SULPHIDE; DIMETHYL SULPHIDE; DIMETHYL MONOSULFIDE; METHYLTHIOMETHANE; 2-THIAPROPANE; THIOBISMETHANE; UN 1164; STCC 4908151; MAT07760; RTECS PV5075000

CHEMICAL FAMILY: hydrocarbons, aliphatic

CREATION DATE: Jan 24 1989
REVISION DATE: Dec 11 2008

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: DIMETHYL SULFIDE
CAS NUMBER: 75-18-3
PERCENTAGE: 100.0

3. HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=2  FIRE=4  REACTIVITY=0

EMERGENCY OVERVIEW:
COLOR: colorless to yellow
PHYSICAL FORM: liquid
ODOR: unpleasant odor

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation

PHYSICAL HAZARDS: Flammable liquid and vapor. Vapor may cause flash fire.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation, difficulty breathing, lung congestion
LONG TERM EXPOSURE: no information on significant adverse effects
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: same as effects reported in short term exposure
EYE CONTACT:
SHORT TERM EXPOSURE: irritation (possibly severe)
LONG TERM EXPOSURE: same as effects reported in short term exposure
INGESTION:
SHORT TERM EXPOSURE: nausea, vomiting, diarrhea, stomach pain, bluish skin color, lung congestion, convulsions
LONG TERM EXPOSURE: no information is available

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: Never make an unconscious person vomit or drink fluids. Give sodium bicarbonate solution. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

NOTE TO PHYSICIAN: For ingestion, consider gastric lavage.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.

EXTINGUISHING MEDIA: regular dry chemical, carbon dioxide, water, regular foam

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny
entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any
discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile).
Water may be ineffective.

FLASH POINT: -36 F (-38 C) (CC)
LOWER FLAMMABLE LIMIT: 2.2%
UPPER FLAMMABLE LIMIT: 9.7%
AUTOIGNITION: 403 F (206 C)
FLAMMABILITY CLASS (OSHA): IA

6. ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:
Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce
vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled
material in appropriate container for disposal. Large spills: Dike for later disposal. Remove sources of
ignition. Keep unnecessary people away, isolate hazard area and deny entry.

7. HANDLING AND STORAGE

STORAGE: Store and handle in accordance with all current regulations and standards. Protect from
physical damage. Store outside or in a detached building. Store with flammable liquids. Keep separated from
incompatible substances.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
DIMETHYL SULFIDE:
10 ppm ACGIH TWA

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure
limits.

EYE PROTECTION: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye
wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed.
Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before
use.
Any chemical cartridge respirator with organic vapor cartridge(s).
Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
Any air-purifying respirator with a full facepiece and an organic vapor canister.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHYSICAL STATE:</strong></td>
<td>liquid</td>
</tr>
<tr>
<td><strong>COLOR:</strong></td>
<td>colorless to yellow</td>
</tr>
<tr>
<td><strong>ODOR:</strong></td>
<td>unpleasant odor</td>
</tr>
<tr>
<td><strong>MOLECULAR FORMULA:</strong></td>
<td>C2-H6-S</td>
</tr>
<tr>
<td><strong>BOILING POINT:</strong></td>
<td>99 F (37 C)</td>
</tr>
<tr>
<td><strong>FREEZING POINT:</strong></td>
<td>-144 F (-98 C)</td>
</tr>
<tr>
<td><strong>VAPOR PRESSURE:</strong></td>
<td>1 atm @ 36 C</td>
</tr>
<tr>
<td><strong>VAPOR DENSITY (air=1):</strong></td>
<td>2.1</td>
</tr>
<tr>
<td><strong>SPECIFIC GRAVITY (water=1):</strong></td>
<td>0.8</td>
</tr>
<tr>
<td><strong>WATER SOLUBILITY:</strong></td>
<td>slightly soluble</td>
</tr>
<tr>
<td><strong>PH:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>VOLATILITY:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>ODOR THRESHOLD:</strong></td>
<td>0.001 ppm</td>
</tr>
<tr>
<td><strong>EVAPORATION RATE:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>COEFFICIENT OF WATER/OIL DISTRIBUTION:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>SOLVENT SOLUBILITY:</strong></td>
<td>Soluble: alcohol, ether</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

**REACTIVITY:** Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:** Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.

**INCOMPATIBILITIES:** peroxides, oxidizing materials

**HAZARDOUS DECOMPOSITION:**
Thermal decomposition products: oxides of sulfur, carbon

**POLYMERIZATION:** Will not polymerize.
11. TOXICOLOGICAL INFORMATION

**DIMETHYL SULFIDE:**

**IRRITATION DATA:** 500 mg/24 hour(s) skin-rabbit mild; 250 ug/24 hour(s) eyes-rabbit severe

**TOXICITY DATA:** 40250 ppm inhalation-rat LC50; >5 gm/kg skin-rabbit LD50; 3300 mg/kg oral-rat LD50

**LOCAL EFFECTS:**
Irritant: inhalation, skin, eye

**ACUTE TOXICITY LEVEL:**
Moderately Toxic: ingestion
Slightly Toxic: inhalation

12. ECOLOGICAL INFORMATION

Not available

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

**U.S. DOT 49 CFR 172.101:**

**PROPER SHIPPING NAME:** Dimethyl sulfide

**ID NUMBER:** UN1164

**HAZARD CLASS OR DIVISION:** 3

**PACKING GROUP:** II

**LABELING REQUIREMENTS:** 3

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:**

**SHIPPING NAME:** Dimethyl sulphide

**UN NUMBER:** UN1164

**CLASS:** 3

**PACKING GROUP/CATEGORY:** II

15. REGULATORY INFORMATION

**U.S. REGULATIONS:**

**CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):** Not regulated.


SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370 Subparts B and C):
ACUTE: Yes
CHRONIC: No
FIRE: Yes
REACTIVE: No
SUDDEN RELEASE: No


STATE REGULATIONS:
California Proposition 65: Not regulated.

CANADIAN REGULATIONS:
WHMIS CLASSIFICATION: BD2

NATIONAL INVENTORY STATUS:
U.S. INVENTORY (TSCA): Listed on inventory.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CANADA INVENTORY (DSL/NDSL): Not determined.

16. OTHER INFORMATION

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