SAFETY DATA SHEET

Methyl 3-Mercaptopropionate

Version 2.8


SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product information

Product Name: Methyl 3-Mercaptopropionate
Material: 1113892, 1086430, 1093790, 1086431, 1086432, 1086433, 1066661, 1025300, 1024824, 1027475, 1024823

EC-No. Registration number

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. EC-No. Index No.</th>
<th>Legal Entity Registration number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl 3-Mercaptopropionate</td>
<td>2935-90-2 220-912-4</td>
<td>Chevron Phillips Chemicals International NV 01-2119491310-47-0000</td>
</tr>
</tbody>
</table>

Relevant Identified Uses Supported: Intermediate: The substance is registered as a Transported Isolated Intermediate with Strictly Controlled Conditions (SCC) defined in Article 18(4) of Regulation EC No. 1907/2006 and must therefore be handled as such.

1.3 Details of the supplier of the safety data sheet

Company: Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Local: Chevron Phillips Chemicals International N.V.
Airport Plaza (Stockholm Building)
Leonardo Da Vinci laan 19
1831 Diegem
Belgium

SDS Requests: (800) 852-5530
Technical Information: (832) 813-4862
Responsible Party: Product Safety Group
Email:sds@cpchem.com

SDS Number: 100000013277 1/14
SAFETY DATA SHEET

Methyl 3-Mercaptopropionate

Version 2.8

Revision Date 2018-10-26

1.4 Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)

Transport:
CHEMTREC 800.424.9300 or 703.527.3887 (int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-1159839431

Responsible Department: Product Safety and Toxicology Group
E-mail address: SDS@CPChem.com
Website: www.CPChem.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
REGULATION (EC) No 1272/2008

Acute toxicity, Category 3
H301: Toxic if swallowed.

Acute toxicity, Category 2
H330: Fatal if inhaled.

Acute toxicity, Category 4
H312: Harmful in contact with skin.

Short-term (acute) aquatic hazard,
Category 1
H400: Very toxic to aquatic life.

Long-term (chronic) aquatic hazard,
Category 1
H410: Very toxic to aquatic life with long lasting effects.

2.2 Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms:

Signal Word: Danger

Hazard Statements:
H301: Toxic if swallowed.
H312: Harmful in contact with skin.
H330: Fatal if inhaled.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements:
Prevention:
P260 Do not breathe dust/fume/gas/mist/vapor/spray.
P273 Avoid release to the environment.

Response:
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P304 + P340 + P310 IF INHALED: Remove person to fresh

SDS Number: 100000013277

2/14
SAFETY DATA SHEET

Methyl 3-Mercaptopropionate

Version 2.8  Revision Date 2018-10-26

Hazardous ingredients which must be listed on the label:

- 2935-90-2  Methyl 3-Mercaptopropionate

SECTION 3: Composition/information on ingredients

3.1 - 3.2 Substance or Mixture

Synonyms:
- MMP
- Methyl beta-Mercaptopropionate
- Methyl-3 Mercaptopropionate

Molecular formula: C4H8O2S

Hazardous ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No. Index No.</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration [wt%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl 3-Mercaptopropionate</td>
<td>2935-90-2</td>
<td>220-912-4</td>
<td>Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 4; H312 Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>99 - 100</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice: Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.

If inhaled: Call a physician or poison control center immediately. If unconscious, place in recovery position and seek medical advice.

In case of skin contact: Take victim immediately to hospital. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

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If swallowed: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

SECTION 5: Firefighting measures

Flash point: 67 °C (153 °F)  
Method: closed cup

Autoignition temperature: No data available

5.1 Extinguishing media

Suitable extinguishing media: Carbon dioxide (CO2).

Unsuitable extinguishing media: High volume water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Fire and explosion protection: Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

Hazardous decomposition products: Sulfur oxides.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers...
and lakes or drains inform respective authorities.

### 6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

**SECTION 7: Handling and storage**

#### 7.1 Precautions for safe handling

**Handling**

Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Do not spray on an open flame or any other incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

#### 7.2 Conditions for safe storage, including any incompatibilities

**Storage**

Requirements for storage areas and containers: Prevent unauthorized access. No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

**SECTION 8: Exposure controls/personal protection**

#### 8.2 Exposure controls

**Engineering measures**

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**Personal protective equipment**

SDS Number: 100000013277
**Respiratory protection**: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Full-Face Supplied-Air Respirator. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

**Hand protection**: The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

**Eye protection**: Eye wash bottle with pure water.

**Skin and body protection**: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant protective clothing. Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus. Footwear protecting against chemicals.

**Hygiene measures**: Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

In case of an accident during maintenance/cleaning, this substance must be handled under Strictly Controlled Conditions (SCC) in accordance with REACH regulation Article 18(4) for transported isolated intermediates. For additional details, see the Exposure Scenario in the Annex portion.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

**Appearance**
- Form: Liquid
- Physical state: Liquid
- Color: Colorless
- Odor: Repulsive

**Safety data**
- Flash point: 67 °C (153 °F)
  - Method: closed cup
- Lower explosion limit: No data available
- Upper explosion limit: No data available
Methyl 3-Mercaptopropionate

Oxidizing properties : No

Autoignition temperature : No data available

Molecular formula : C4H8O2S

Molecular weight : 120.18 g/mol

pH : Not applicable

Freezing point : No data available

Pour point : No data available

Boiling point/boiling range : 166 - 169 °C (331 - 336 °F)

Vapor pressure : 2,00 MMHG
at 21 °C (70 °F)

Relative density : 1.11
at 15 °C (59 °F), estimated

Water solubility : Negligible

Partition coefficient: n-octanol/water : No data available

Viscosity, kinematic : No data available

Relative vapor density : 4.1
(Air = 1.0)

Evaporation rate : No data available

Percent volatile : > 99 %

SECTION 10: Stability and reactivity

10.1
Reactivity : Stable under recommended storage conditions.

10.2
Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3
Possibility of hazardous reactions

Hazardous reactions : Hazardous reactions: Hazardous polymerization does not occur.
### Further information
No decomposition if stored and applied as directed.

### Hazardous reactions
Vapors may form explosive mixture with air.

#### 10.4 Conditions to avoid
Heat, flames and sparks.

#### 10.6 Hazardous decomposition products
Sulfur oxides

### 10.8 Other data
No decomposition if stored and applied as directed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute oral toxicity
Methyl 3-Mercaptopropionate: LD50: 194 mg/kg  
Species: Rat  
Sex: male and female  
Method: OECD Test Guideline 401

#### Acute inhalation toxicity
Methyl 3-Mercaptopropionate: LC50: 1.8 - 2.11 mg/l  
Exposure time: 4 h  
Species: Rat  
Test atmosphere: vapor  
Method: OECD Test Guideline 403

#### Acute dermal toxicity
Methyl 3-Mercaptopropionate: LD50: 1.903,7 mg/kg  
Species: Rabbit  
Sex: male and female  
Method: OECD Test Guideline 402

#### Skin irritation
Methyl 3-Mercaptopropionate: No skin irritation

#### Eye irritation
Methyl 3-Mercaptopropionate: slight irritation.

#### Sensitization
Methyl 3-Mercaptopropionate: Did not cause sensitization on laboratory animals.

#### Repeated dose toxicity
Methyl 3-Mercaptopropionate: Species: Rat, Male and female
### Methyl 3-Mercaptopropionate

<table>
<thead>
<tr>
<th>Sex:</th>
<th>Male and female</th>
</tr>
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<tbody>
<tr>
<td>Route:</td>
<td>oral gavage</td>
</tr>
<tr>
<td>Dose:</td>
<td>25, 50, 100 mg/kg</td>
</tr>
<tr>
<td>Exposure time:</td>
<td>28 day</td>
</tr>
<tr>
<td>Number of exposures:</td>
<td>daily</td>
</tr>
<tr>
<td>NOEL:</td>
<td>50 mg/kg</td>
</tr>
<tr>
<td>Lowest observable effect level:</td>
<td>100 mg/kg</td>
</tr>
<tr>
<td>Method:</td>
<td>OECD Test Guideline 407</td>
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<tr>
<td>Target Organs:</td>
<td>Stomach</td>
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</tbody>
</table>

#### Genotoxicity in vitro

<table>
<thead>
<tr>
<th>Methyl 3-Mercaptopropionate</th>
<th>Test Type: Ames test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result: negative</td>
<td></td>
</tr>
</tbody>
</table>

| Test Type: Mouse lymphoma assay |
| Result: negative               |

| Test Type: Sister Chromatid Exchange Assay |
| Result: positive                 |

#### Reproductive toxicity

<table>
<thead>
<tr>
<th>Methyl 3-Mercaptopropionate</th>
<th>Species: Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex:</td>
<td>male and female</td>
</tr>
<tr>
<td>Route:</td>
<td>oral gavage</td>
</tr>
<tr>
<td>Dose:</td>
<td>25, 50, 100 mg/kg</td>
</tr>
<tr>
<td>Number of exposures: daily</td>
<td>Test period: 28 d</td>
</tr>
<tr>
<td>Method:</td>
<td>OECD Guideline 422</td>
</tr>
<tr>
<td>NOAEL Parent:</td>
<td>100 mg/kg</td>
</tr>
<tr>
<td>NOAEL F1:</td>
<td>100 mg/kg</td>
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<tr>
<td>no abnormalities observed</td>
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</tr>
</tbody>
</table>

#### Developmental Toxicity

<table>
<thead>
<tr>
<th>Methyl 3-Mercaptopropionate</th>
<th>Species: Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route: Oral diet</td>
<td></td>
</tr>
<tr>
<td>Dose:</td>
<td>25, 50, 100 mg/kg</td>
</tr>
<tr>
<td>Test period: 28 d</td>
<td></td>
</tr>
<tr>
<td>NOAEL Teratogenicity: 100 mg/kg</td>
<td></td>
</tr>
<tr>
<td>NOAEL Maternal: 100 mg/kg</td>
<td></td>
</tr>
<tr>
<td>No adverse effects expected</td>
<td></td>
</tr>
</tbody>
</table>

#### Aspiration toxicity

| Methyl 3-Mercaptopropionate | No aspiration toxicity classification. |

#### CMR effects

<table>
<thead>
<tr>
<th>Methyl 3-Mercaptopropionate</th>
<th>Carcinogenicity: Not available</th>
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</thead>
<tbody>
<tr>
<td>Mutagenicity:</td>
<td>Tests on bacterial or mammalian cell cultures did not show mutagenic effects.</td>
</tr>
<tr>
<td>Reproductive toxicity:</td>
<td>No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.</td>
</tr>
</tbody>
</table>
Further information: No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

Methyl 3-Mercaptopropionate:
- LC50: 1,7 mg/l
- Exposure time: 96 h
- Species: Oncorhynchus mykiss (rainbow trout)
- Flow-through test
- Analytical monitoring: yes
- Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

Methyl 3-Mercaptopropionate:
- 0,55 mg/l
- Exposure time: 48 h
- Species: Daphnia magna (Water flea)
- Static test
- Analytical monitoring: yes
- Method: OECD Test Guideline 202

Toxicity to algae

Methyl 3-Mercaptopropionate:
- ErC50: 0,65 mg/l
- Species: Desmodesmus subspicatus (green algae)
- Analytical monitoring: yes
- Method: OECD Test Guideline 201

M-Factor

methyl 3-mercaptopropionate:
- M-Factor (Acute Aquat. Tox.) 1
- M-Factor (Chron. Aquat. Tox.) 1

12.2 Persistence and degradability

Biodegradability

Methyl 3-Mercaptopropionate:
- Aerobic
- Result: Not readily biodegradable. 46.0%
- Method: OECD Test Guideline 301

12.3 Bioaccumulative potential

Bioaccumulation

Methyl 3-Mercaptopropionate:
- Bioconcentration factor (BCF): 3,16
- Method: Estimated based on individual component values.

12.4 Mobility in soil
Methyl 3-Mercaptopropionate

Mobility

Methyl 3-Mercaptopropionate : No data available

12.5 Results of PBT and vPvB assessment

Results of PBT assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Additional ecological information : Very toxic to aquatic life with long lasting effects.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard
Methyl 3-Mercaptopropionate : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard
Methyl 3-Mercaptopropionate : Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

For additional details, see the Exposure Scenario in the Annex portion

SECTION 14: Transport information

14.1 - 14.7

Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names,
etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**
UN2810, TOXIC, LIQUIDS, ORGANIC, N.O.S., (METHYL 3-MERCAPTOPROPIONATE), 6.1, II

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (METHYL 3-MERCAPTOPROPIONATE), 6.1, II, (67 °C), MARINE POLLUTANT, (METHYL 3-MERCAPTOPROPIONATE)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**
UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (METHYL 3-MERCAPTOPROPIONATE), 6.1, II

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (METHYL 3-MERCAPTOPROPIONATE), 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS, (METHYL 3-MERCAPTOPROPIONATE)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (METHYL 3-MERCAPTOPROPIONATE), 6.1, II, ENVIRONMENTALLY HAZARDOUS, (METHYL 3-MERCAPTOPROPIONATE)

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**
UN2810, TOXIC LIQUID, ORGANIC, N.O.S., (METHYL 3-MERCAPTOPROPIONATE), 6.1, II, ENVIRONMENTALLY HAZARDOUS, (METHYL 3-MERCAPTOPROPIONATE)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**SECTION 15: Regulatory information**

15.1  
**Safety, health and environmental regulations/legislation specific for the substance or mixture**

National legislation


15.2  
**Major Accident Hazard Legislation**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>50 t</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Toxic</th>
<th>96/82/EC</th>
<th>Update: 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

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SECTION 16: Other information

NFPA Classification : Health Hazard: 3  
Fire Hazard: 1  
Reactivity Hazard: 0 

Further information

Legacy SDS Number : 75720

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50%</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>LOAEL</td>
<td>Lowest Observed Adverse Effect Level</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Agency</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
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</table>

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Methyl 3-Mercaptopropionate

SAFETY DATA SHEET

Version 2.8
Revision Date 2018-10-26

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical Abstract Service</th>
<th>NZIoC</th>
<th>New Zealand Inventory of Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
<td>NOAEL</td>
<td>No Observable Adverse Effect Level</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
<td>NOEC</td>
<td>No Observed Effect Concentration</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
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<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
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<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
<td>PICCS</td>
<td>Philippines Inventory of Commercial Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
<td>PRNT</td>
<td>Presumed Not Toxic</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
<td>RCRA</td>
<td>Resource Conservation Recovery Act</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act.</td>
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<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
<td>TLV</td>
<td>Threshold Limit Value</td>
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<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
<td>TWA</td>
<td>Time Weighted Average</td>
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<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and New Chemical Substances</td>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
<tr>
<td>KECl</td>
<td>Korea, Existing Chemical Inventory</td>
<td>UVCB</td>
<td>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full text of H-Statements referred to under sections 2 and 3.

H301        Toxic if swallowed.
H312        Harmful in contact with skin.
H330        Fatal if inhaled.
H400        Very toxic to aquatic life.
H410        Very toxic to aquatic life with long lasting effects.