

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Methyl Mercaptan Standard  
Product code : AL0-101546  
Product group : Trade product

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category : Laboratory Use  
Industrial/Professional use spec : Industrial  
For professional use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Phenova  
6390 Joyce Dr. Suite 100  
80403 Golden, CO - United States  
T 1-866-942-2978 - F 1-866-283-0269  
[info@phenova.com](mailto:info@phenova.com) - [www.phenova.com](http://www.phenova.com)

#### 1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924  
ChemTel Assistance (International) +1 813-248-0585

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Skin Irrit. 2 H315  
Repr. 2 H361  
STOT SE 3 H336  
STOT RE 2 H373

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Repr.Cat.3; R63  
F+; R12  
Xn; R48/20  
Xi; R38  
R67

Full text of R-phrases: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02



GHS07



GHS08

Signal word (CLP) : Danger

Hazardous ingredients : toluene

# Methyl Mercaptan Standard

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

- Hazard statements (CLP) : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H336 - May cause drowsiness or dizziness  
H361 - Suspected of damaging fertility or the unborn child  
H373 - May cause damage to organs through prolonged or repeated exposure
- Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P264 - Wash ... thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P362+P364 - Take off contaminated clothing and wash it before reuse  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed

No labeling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

| Name                            | Product identifier   | %    | Classification according to Regulation (EC) No. 1272/2008 [CLP]  |
|---------------------------------|--|------|--|
| toluene<br>(Component)          | (CAS No) 108-88-3<br>(EC no) 203-625-9<br>(EC index no) 601-021-00-3 | 99.8 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Repr. 2, H361d<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304 |
| methyl mercaptan<br>(Component) | (CAS No) 74-93-1<br>(EC no) 200-822-1<br>(EC index no) 016-021-00-3  | 0.2  | Flam. Gas 1, H220<br>Press. Gas<br>Acute Tox. 3 (Inhalation), H331<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause drowsiness or dizziness.
- Symptoms/injuries after skin contact : Causes skin irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapor.
- Explosion hazard : May form flammable/explosive vapor-air mixture.

# Methyl Mercaptan Standard

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapors/spray.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up in absorbent material. Collect spillage.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

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

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
- Storage conditions : Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
- Incompatible materials : Direct sunlight. Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

- Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.
- Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



- Hand protection : Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.
- Eye protection : Chemical goggles or safety glasses. Safety glasses.
- Skin and body protection : Wear suitable protective clothing. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.
- Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
- Other information : Do not eat, drink or smoke during use.

# Methyl Mercaptan Standard

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

### SECTION 9: Physical and chemical properties

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

|                           |                                     |
|---------------------------|-------------------------------------|
| Physical state            | : Liquid                            |
| Color                     | : Colorless.                        |
| Odor                      | : characteristic.                   |
| pH                        | : No data available                 |
| Melting point             | : No data available                 |
| Freezing point            | : No data available                 |
| Boiling point             | : No data available                 |
| Flash point               | : No data available                 |
| Auto-ignition temperature | : No data available                 |
| Decomposition temperature | : No data available                 |
| Flammability (solid, gas) | : Highly flammable liquid and vapor |
| Relative density          | : No data available                 |
| Solubility                | : No data available                 |
| Explosive properties      | : No data available                 |
| Oxidizing properties      | : No data available                 |
| Explosion limits          | : No data available                 |

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| <b>methyl mercaptan (74-93-1)</b> |   |
|-----------------------------------|---|
| LD50 oral rat                     | 110 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Read-across)   |
| LC50 inhalation rat (mg/l)        | 1.38 mg/l/4h (Rat)  |
| LC50 inhalation rat (ppm)         | 675 ppm/4h (Rat)  |
| <b>toluene (108-88-3)</b>         |   |
| LD50 oral rat                     | > 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 5580 mg/kg bodyweight; Rat; Experimental value) |
| LD50 dermal rabbit                | 12223 mg/kg (Rabbit; Literature study; Other; >5000 mg/kg bodyweight; Rabbit; Experimental value)                       |
| LC50 inhalation rat (mg/l)        | > 20 mg/l/4h (Rat; Literature study)  |
| ATE CLP (dermal)                  | 12223.000 mg/kg body weight   |
| Skin corrosion/irritation         | : Causes skin irritation.   |
| Serious eye damage/irritation     | : Not classified<br>Based on available data, the classification criteria are not met                                    |
| Respiratory or skin sensitization | : Not classified<br>Based on available data, the classification criteria are not met                                    |
| Germ cell mutagenicity            | : Not classified<br>Based on available data, the classification criteria are not met                                    |

# Methyl Mercaptan Standard

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

|   |  |
|---|--|
| Carcinogenicity                                     | : Not classified<br>Based on available data, the classification criteria are not met<br>May cause cancer |
| Reproductive toxicity                               | : Suspected of damaging fertility or the unborn child.   |
| Specific target organ toxicity (single exposure)    | : May cause drowsiness or dizziness.   |
| Specific target organ toxicity (repeated exposure)  | : May cause damage to organs through prolonged or repeated exposure.                                     |
| Aspiration hazard                                   | : Not classified<br>Based on available data, the classification criteria are not met                     |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met.                                      |

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

| <b>Methyl Mercaptan Standard</b>  |   |
|-----------------------------------|---|
| Persistence and degradability     | Not established.  |
| <b>methyl mercaptan (74-93-1)</b> |   |
| Persistence and degradability     | Readily biodegradable in water in anaerobic conditions. Biodegradable in water.<br>Biodegradability in soil: not applicable. Not applicable (gas). Photodegradation in the air. |
| <b>toluene (108-88-3)</b>         |   |
| Persistence and degradability     | Readily biodegradable in water. easily degradable in the soil.  |
| Biochemical oxygen demand (BOD)   | 2.15 g O <sub>2</sub> /g substance  |
| Chemical oxygen demand (COD)      | 2.52 g O <sub>2</sub> /g substance  |
| ThOD                              | 3.13 g O <sub>2</sub> /g substance  |
| BOD (% of ThOD)                   | 0.69  |

#### 12.3. Bioaccumulative potential

| <b>Methyl Mercaptan Standard</b>  |  |
|-----------------------------------|--|
| Bioaccumulative potential         | Not established.   |
| <b>methyl mercaptan (74-93-1)</b> |  |
| Log Pow                           | 0.65 (Calculated)  |
| Bioaccumulative potential         | Low potential for bioaccumulation (Log Kow < 4).           |
| <b>toluene (108-88-3)</b>         |  |
| BCF fish 2                        | 90 (BCF; 72 h; Leuciscus idus; Static system; Fresh water) |
| Log Pow                           | 2.73 (Experimental value; Other; 20 °C)                    |
| Bioaccumulative potential         | Low potential for bioaccumulation (BCF < 500).             |

#### 12.4. Mobility in soil

| <b>methyl mercaptan (74-93-1)</b> |                  |
|-----------------------------------|------------------|
| Surface tension                   | 0.031 N/m (5 °C) |
| <b>toluene (108-88-3)</b>         |                  |
| Surface tension                   | 0.03 N/m (20 °C) |

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

Additional information : Avoid release to the environment

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

|                                |  |
|--------------------------------|--|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations.  |
| Additional information         | : Handle empty containers with care because residual vapors are flammable. |
| Ecology - waste materials      | : Avoid release to the environment.  |

# Methyl Mercaptan Standard

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : 1993  
UN-No.(IATA) : 1993

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, N.O.S.  
Proper Shipping Name (IATA) : FLAMMABLE LIQUID, N.O.S.  
Transport document description (ADR) : UN 1993 FLAMMABLE LIQUID, N.O.S., 3, II, (D/E)

#### 14.3. Packing group

Class (ADR) : 3  
Classification code (ADR) : F1  
Class (IATA) : 3  
Hazard labels (ADR) : 3



Hazard labels (IATA) : 3



#### 14.4. Packing group

Packing group (ADR) : II  
Packing group (IATA) : II

#### 14.5. Environmental hazards

Other information : No supplementary information available.

#### 14.6. Special precautions for user

##### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 33  
Classification code (ADR) : F1  
Orange plates :



Special provision (ADR) : 274, 601, 640D  
Transport category (ADR) : 2  
Tunnel restriction code (ADR) : D/E  
Limited quantities (ADR) : 1I  
Excepted quantities (ADR) : E2

##### 14.6.2. Transport by sea

No additional information available

##### 14.6.3. Air transport

CAO packing instructions (IATA) : 364  
CAO max net quantity (IATA) : 60L  
PCA packing instructions (IATA) : 353  
PCA Limited quantities (IATA) : Y341  
PCA limited quantity max net quantity (IATA) : 1L  
PCA max net quantity (IATA) : 5L  
PCA Excepted quantities (IATA) : E2  
ERG code (IATA) : 3H

# Methyl Mercaptan Standard

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EC) No. 453/2010

### 14.6.4. Inland waterway transport

Carriage prohibited (ADN) : No

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

PHV SDS EU

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