

## 1 Identification

### Product identifier

**Product name:** Ethyl 2-mercaptoacetate

**Stock number:** L03125

**CAS Number:**

623-51-8

**EC number:**

210-800-3

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

**Identified use:** SU24 Scientific research and development

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

#### Manufacturer/Supplier:

Alfa Aesar

Thermo Fisher Scientific Chemicals, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

**Information Department:** Health, Safety and Environmental Department

**Emergency telephone number:**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

## 2 Hazard(s) identification

**Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

**Hazards not otherwise classified** Stench

### Label elements

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

### Hazard pictograms



GHS02 GHS06

**Signal word** Danger

### Hazard statements

H226 Flammable liquid and vapour.

H301 Toxic if swallowed.

### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective clothing.

P233 Keep container tightly closed.

P309 IF exposed or if you feel unwell:

P310 Immediately call a POISON CENTER/doctor/...

### WHMIS classification

B3 - Combustible liquid

D1A - Very toxic material causing immediate and serious toxic effects



### Classification system

**HMIS ratings (scale 0-4)**

**(Hazardous Materials Identification System)**

HEALTH 2 Health (acute effects) = 2

FIRE 2 Flammability = 2

REACTIVITY 1 Physical Hazard = 1

### Other hazards

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3 Composition/information on ingredients

**Chemical characterization:** Substances

**CAS# Description:**

623-51-8 Ethyl 2-mercaptoacetate

**Identification number(s):**

**EC number:** 210-800-3

## 4 First-aid measures

### Description of first aid measures

### General information

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

**Product name:** **Ethyl 2-mercaptoacetate**

**After inhalation**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
**After skin contact**  
Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.  
**After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.  
**After swallowing** Do not induce vomiting; immediately call for medical help.  
**Information for doctor**  
**Most important symptoms and effects, both acute and delayed** No further relevant information available.  
**Indication of any immediate medical attention and special treatment needed** No further relevant information available.

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**5 Fire-fighting measures**

**Extinguishing media**  
**Suitable extinguishing agents** In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.  
**Special hazards arising from the substance or mixture**  
If this product is involved in a fire, the following can be released:  
Carbon monoxide and carbon dioxide  
Sulfur oxides (SOx)  
**Advice for firefighters**  
**Protective equipment:**  
Wear self-contained respirator.  
Wear fully protective impervious suit.

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources  
**Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.  
**Methods and material for containment and cleaning up:**  
Keep away from ignition sources.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
**Prevention of secondary hazards:** Keep away from ignition sources.  
**Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

**Handling**  
**Precautions for safe handling**  
Handle under dry protective gas.  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.  
**Information about protection against explosions and fires:**  
Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.  
Keep ignition sources away.  
**Conditions for safe storage, including any incompatibilities**  
**Storage**  
**Requirements to be met by storerooms and receptacles:** No special requirements.  
**Information about storage in one common storage facility:**  
Store away from oxidizing agents.  
Store away from air.  
**Further information about storage conditions:**  
Store under dry inert gas.  
This product is air sensitive.  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
**Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

**Additional information about design of technical systems:**  
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.  
**Control parameters**  
**Components with limit values that require monitoring at the workplace:** Not required.  
**Additional information:** No data  
**Exposure controls**  
**Personal protective equipment**  
**General protective and hygienic measures**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.  
Maintain an ergonomically appropriate working environment.  
**Breathing equipment:** Use suitable respirator when high concentrations are present.  
**Protection of hands:**  
Impervious gloves  
Check protective gloves prior to each use for their proper condition.  
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.  
**Eye protection:** Safety glasses  
**Body protection:** Protective work clothing.

Product name: **Ethyl 2-mercaptoacetate**

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**9 Physical and chemical properties**

<b>Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance:</b>	
Form:	Liquid
Color:	Colorless
Odor:	Stench
Odor threshold:	Not determined.
<b>pH-value:</b>	
Not determined.	
<b>Change in condition</b>	
Melting point/Melting range:	-80 °C (-112 °F)
Boiling point/Boiling range:	156-159 °C (313-318 °F)
Sublimation temperature / start:	Not determined
<b>Flash point:</b>	
48 °C (118 °F)	
<b>Flammability (solid, gaseous)</b>	
Not determined.	
<b>Ignition temperature:</b>	
Not determined	
<b>Decomposition temperature:</b>	
Not determined	
<b>Auto igniting:</b>	
Not determined.	
<b>Danger of explosion:</b>	
Product is not explosive. However, formation of explosive air/vapor mixtures is possible.	
<b>Explosion limits:</b>	
<b>Lower:</b>	
Not determined	
<b>Upper:</b>	
Not determined	
<b>Vapor pressure at 55 °C (131 °F):</b>	
23 hPa (17 mm Hg)	
<b>Density at 20 °C (68 °F):</b>	
1.096 g/cm³ (9.146 lbs/gal)	
<b>Relative density</b>	
Not determined.	
<b>Vapor density</b>	
Not determined.	
<b>Evaporation rate</b>	
Not determined.	
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	
Not miscible or difficult to mix	
<b>Partition coefficient (n-octanol/water):</b>	
Not determined.	
<b>Viscosity:</b>	
<b>dynamic at 20 °C (68 °F):</b>	
1.2 mPas	
<b>kinematic:</b>	
Not determined.	
<b>Other information</b>	
No further relevant information available.	

**10 Stability and reactivity**

<b>Reactivity</b> No information known.	
<b>Chemical stability</b> Stable under recommended storage conditions.	
<b>Thermal decomposition / conditions to be avoided:</b> Decomposition will not occur if used and stored according to specifications.	
<b>Possibility of hazardous reactions</b> No dangerous reactions known	
<b>Conditions to avoid</b> No further relevant information available.	
<b>Incompatible materials:</b>	
Oxidizing agents	
Air	
<b>Hazardous decomposition products:</b>	
Carbon monoxide and carbon dioxide	
Sulfur oxides (SOx)	
Hydrogen sulfide	

**11 Toxicological information**

<b>Information on toxicological effects</b>	
<b>Acute toxicity:</b> Toxic if swallowed.	
<b>LD/LC50 values that are relevant for classification:</b> No data	
<b>Skin irritation or corrosion:</b> No irritant effect.	
<b>Eye irritation or corrosion:</b> Causes mild irritant effect.	
<b>Sensitization:</b> No sensitizing effects known.	
<b>Germ cell mutagenicity:</b> No effects known.	
<b>Carcinogenicity:</b> No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
<b>Reproductive toxicity:</b> No effects known.	
<b>Specific target organ system toxicity - repeated exposure:</b> No effects known.	
<b>Specific target organ system toxicity - single exposure:</b> No effects known.	
<b>Aspiration hazard:</b> No effects known.	
<b>Subacute to chronic toxicity:</b>	
Thiols/mercaptans may be skin, eye and respiratory irritants. Inhalation may cause central nervous system effects. Often the strong penetrating odor acts to minimize inhalation exposure.	
<b>Additional toxicological information:</b> To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	

**12 Ecological information**

<b>Toxicity</b>	
<b>Aquatic toxicity:</b> No further relevant information available.	
<b>Persistence and degradability</b> No further relevant information available.	
<b>Bioaccumulative potential</b> No further relevant information available.	
<b>Mobility in soil</b> No further relevant information available.	
<b>Additional ecological information:</b>	
<b>General notes:</b>	
Do not allow material to be released to the environment without proper governmental permits.	
Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.	
Avoid transfer into the environment.	
<b>Results of PBT and vPvB assessment</b>	
<b>PBT:</b> Not applicable.	
<b>vPvB:</b> Not applicable.	
<b>Other adverse effects</b> No further relevant information available.	

**13 Disposal considerations**





<b>Waste treatment methods</b>	
<b>Recommendation</b> Consult state, local or national regulations to ensure proper disposal.	

**Product name:** **Ethyl 2-mercaptoacetate**

**Uncleaned packagings:**  
**Recommendation:** Disposal must be made according to official regulations.

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#### 14 Transport information

<b>UN-Number</b> <b>DOT, IMDG, IATA</b>	UN1228
<b>UN proper shipping name</b> <b>DOT</b> <b>IMDG, IATA</b>	Mercaptans, liquid, flammable, toxic, n.o.s. (Ethyl 2-mercaptoacetate) MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. (Ethyl 2-mercaptoacetate)
<b>Transport hazard class(es)</b> <b>DOT</b>	
 	
<b>Class</b> <b>Label</b> <b>Class</b> <b>Label</b> <b>IMDG, IATA</b>	3 Flammable liquids. 3+6.1 3 (FT1) Flammable liquids 3+6.1
 	
<b>Class</b> <b>Label</b>	3 Flammable liquids. 3+6.1
<b>Packing group</b> <b>DOT, IMDG, IATA</b>	III
<b>Environmental hazards:</b>	Not applicable.
<b>Special precautions for user</b>	Warning: Flammable liquids
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>Transport/Additional information:</b>	
<b>DOT</b> <b>Marine Pollutant (DOT):</b>	No
<b>UN "Model Regulation":</b>	UN1228, Mercaptans, liquid, flammable, toxic, n.o.s. (Ethyl 2-mercaptoacetate), 3 (6.1), III

#### 15 Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**  
**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)  
**Hazard pictograms**



GHS02 GHS06

**Signal word** Danger

**Hazard statements**

H226 Flammable liquid and vapour.

H301 Toxic if swallowed.

**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective clothing.

P233 Keep container tightly closed.

P309 IF exposed or if you feel unwell:

P310 Immediately call a POISON CENTER/doctor/...

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

**SARA Section 313 (specific toxic chemical listings)** Substance is not listed.

**California Proposition 65**

**Prop 65 - Chemicals known to cause cancer** Substance is not listed.

**Prop 65 - Developmental toxicity** Substance is not listed.

**Prop 65 - Developmental toxicity, female** Substance is not listed.

**Prop 65 - Developmental toxicity, male** Substance is not listed.

**Information about limitation of use:** For use only by technically qualified individuals.

**Other regulations, limitations and prohibitive regulations**

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.** Substance is not listed.

**The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.**

Substance is not listed.

**Annex XIV of the REACH Regulations (requiring Authorisation for use)** Substance is not listed.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

#### 16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:** Global Marketing Department

**Date of preparation / last revision** 11/23/2015 / -

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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USA

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USA