

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 25.08.2007

Revision: 25.08.2007

**1 Identification of substance:**

· **Product details:**

· **Trade name:** 2-mercaptoethanol

· **Article number:** 4049, 8683

· **Application of the substance / the preparation**

Chemicals for synthesis

Laboratory chemicals

· **Manufacturer/Supplier:**

Mallinckrodt Baker B.V

P.O.Box 1

7400 AA Deventer

The Netherlands

Tel(+31)(0) 570-687500

Fax(+31)(0) 570-687574

E-mail : jtbaker.nl@covidien.com

· **Informing department:**

Quality Systems & Regulatory Affairs

E-mail : sjors.duteweert@covidien.com

· **Emergency information:**

Environment Health & Safety department

during normal opening times (8 am till 5.30 pm) tel: (+31)(0) 570 687500

**2 Hazards identification**

· **Hazard designation:**



T Toxic

N Dangerous for the environment

· **Information pertaining to particular dangers for man and environment**

R 22 Harmful if swallowed.

R 24 Toxic in contact with skin.

R 34 Causes burns.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**3 Composition/information on ingredients**

· **Chemical characterization:**

· **CAS No. Designation:**

60-24-2 2-mercaptoethanol

· **Identification number(s):**

· **EINECS Number:** 200-464-6

**4 First aid measures**

· **General information**

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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

· **After inhalation** In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact** Instantly wash with water and soap and rinse thoroughly.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

· **After swallowing**

Instantly call for doctor.

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Drink copious amounts of water and provide fresh air. Instantly call for doctor.

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**5 Fire fighting measures**

- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **Special hazards caused by the material, its products of combustion or flue gases:**  
Formation of toxic gases is possible during heating or in case of fire.
- **Protective equipment:** Wear self-contained breathing apparatus.

**6 Accidental release measures**

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**  
Inform respective authorities in case product reaches water or sewage system.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**7 Handling and storage**

- **Handling**
- **Information for safe handling:** Use only in well ventilated areas.
- **Information about protection against explosions and fires:** no special requirements
- **Storage**
- **Requirements to be met by storerooms and containers:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Store container in fume cupboard.  
+ 15°C - +25°C  
Keep container tightly sealed.

**8 Exposure controls and personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with critical values that require monitoring at the workplace:**
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not necessary if room is well-ventilated.
- **Protection of hands:**  
Protective gloves.

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed safety glasses.

· **Body protection:** Protective work clothing.

**9 Physical and chemical properties:**

· **General Information**

**Form:** Liquid  
Liquid  
**Colour:** Colourless  
**Smell:** Characteristic

· **Change in condition**

**Melting point/Melting range:** -10°C

**Boiling point/Boiling range:** 157°C

· **Flash point:** 68°C

· **Ignition temperature:** 295°C

· **Danger of explosion:** Product is not explosive.

· **Critical values for explosion:**

**Lower:** 2.3 Vol %

**Upper:** 18 Vol %

· **Steam pressure at 20°C:** 3.6 hPa

· **Density at 20°C** 1.12 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

**10 Stability and reactivity**

· **Thermal decomposition / conditions to be avoided:** Heat,boiling teperatures.

· **Materials to be avoided:**

· **Dangerous reactions** No dangerous reactions known

· **Dangerous products of composition:** No dangerous decomposition products known

**11 Toxicological information**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	190 mg/kg (mouse)
		244 mg/kg (rat)
Dermal	LD50	300 mg/kg (Guinea Pig)
		150 mg/kg (rat)

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- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**12 Ecological information:**

· **Ecotoxicological effects:**

· **Aquatic toxicity:**

EC50 / 17h	125 mg/l (Pseudomonas putida.)
EC50/48h	1.52 mg/l (daphnia magna)
IC50 / 72h	12 mg/l (Desmodesmus subspicatus)
LC50/96h	46-100 mg/l (Orfe, golden (Leuciscus Idus))

- **Remark:** Toxic for fish
- **General notes:**  
Water danger class (D) 3 (Assessment by list): extremely hazardous for water.  
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.  
Must not reach sewage water or drainage ditch undiluted or unneutralized.  
Danger to drinking water if even extremely small quantities leak into soil.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms

**13 Disposal considerations**

- **Product:**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

· **Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**



- **ADR/RID-GGVS/E Class:** 6.1 Toxic substances.
- **Kemler Number:** 60
- **UN-Number:** 2966
- **Packaging group:** II
- **Label** 6.1
- **Designation of goods:** 2966 THIOGLYCOL
- **Limited quantities (LQ)** LQ17
- **Transport category** 2

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· **Tunnel restriction code** E

· **Maritime transport IMDG/GGVSea:**



· **IMDG/GGVSea Class:** 6.1  
 · **UN Number:**  
 · **Label** 6.1  
 · **Packaging group:** II  
 · **EMS Number:** F-A,S-A

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 6.1  
 · **UN/ID Number:**  
 · **Label** 6.1  
 · **Packaging group:** II

**15 Regulatory information**

· **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

· **Code letter and hazard designation of product:**

T Toxic  
 N Dangerous for the environment

· **Risk phrases:**

22 Harmful if swallowed.  
 24 Toxic in contact with skin.  
 34 Causes burns.  
 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 28 After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer).  
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

**16 Other information:**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing data specification sheet:** Quality Assurance Department
- **Contact:** Sjors duteweert
- **\* Data compared to the previous version altered.**