

**SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----**

Product Name                                    b-Mercaptoethanol  
 Product Code(s)                                MB0338  
 Recommended Use                                For Laboratory Research Use Only  
                                                           Not for Human or Animal Drug Use

**SECTION 2. ----- HAZARDS IDENTIFICATION -----**

**Classification of the substance or mixture**

**Classification according to Hazardous Products Regulation (SOR/2015-17)**

Hazard classes and hazard categories	Hazard statements
Flammable liquid, category 4	H227
Acute toxicity, category 1, dermal	H310
Acute toxicity, category 2, inhalation	H330
Acute toxicity, category 3, oral	H301
Skin irritation, category 2	H315
Serious eye damage, category 1	H318

**Label elements**

**Labelling in accordance with (SOR/2015-17)**

**Hazard pictograms**



**Signal word:** Danger

Hazard statements	
H227	Combustible liquid
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H301	Toxic if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary Statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243	Take precautionary measures against static discharge.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of water/...
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P310	IF exposed or concerned: Immediately call a POISON CENTER/doctor.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

**Hazards not otherwise classified (HNOC)** none/none

### SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	CAS-No	Weight %
b-Mercaptoethanol	200-464-6	60-24-2	<100

### SECTION 4. ----- FIRST-AID MEASURES -----

#### General information

IF exposed: Immediately call a POISON CENTER/doctor. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

**In case of inhalation**

Immediately call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

**In case of skin contact**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

**After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

**In case of ingestion**

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

**Most important symptoms/effects, acute and delayed**

no data available

**Indication of any immediate medical attention and special treatment needed**

no data available

**Self-protection of the first aider**

First aider: Pay attention to self-protection!

**Information to physician**

no data available

**SECTION 5. ----- FIRE FIGHTING MEASURES -----****Extinguishing media****Suitable extinguishing media**

The product itself does not burn.  
Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons** no restriction**Specific hazards arising from the chemical**

In case of fire may be liberated:  
Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)  
Sulphur oxides

**Advice for firefighters**

DO NOT fight fire when fire reaches explosives.  
Protective equipment and precautions for firefighters  
Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

Do not allow run-off from fire-fighting to enter drains or water courses.  
Do not inhale explosion and combustion gases.  
Use water spray/stream to protect personnel and to cool endangered containers.  
In case of fire: Evacuate area.

## **SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----**

### **Personal precautions, protective equipment and emergency procedures**

In case of major fire and large quantities: Remove persons to safety.

### **Environmental precautions**

Discharge into the environment must be avoided.

### **Methods and material for containment and cleaning up**

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

### **Additional information**

Clear spills immediately.

## **SECTION 7. ----- HANDLING AND STORAGE-----**

### **Precautions for safe handling**

Avoid:

Inhalation

Avoid contact with eyes and skin. Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Keep away from sources of ignition - No smoking.

Usual measures for fire prevention.

Take precautionary measures against static discharges. Protect from moisture.

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

Recommended storage temperature: Store between 15 °C and 30 °C.

Keep container tightly closed and in a well-ventilated place. Always close containers tightly after the removal of product.

### **Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## **SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----**

### **Control parameters**

Does not contain substances above concentration limits fixing an occupational exposure limit.

### **Engineering controls**

#### **Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### **Personal protection equipment (PPE)**

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

**By short-term hand contact**

Suitable material: NBR (Nitrile rubber)  
Thickness of the glove material: 0,12 mm  
Breakthrough time (maximum wearing time): 10-30 min

**By long-term hand contact**

Suitable material: Butyl caoutchouc (butyl rubber)  
Thickness of the glove material: 0,30 mm  
Breakthrough time (maximum wearing time): > 480 min

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

**Additional information**

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

**Environmental exposure controls**  
no data available

**SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----**

**Information on basic physical and chemical properties**

- (a) Appearance
  - Physical state: liquid
  - Color: colorless
- (b) Odour: no data available
- (c) Odour threshold: no data available

**Safety relevant basic data**

- (d) pH: 4.5-6 (500 g/l; H<sub>2</sub>O; 20 °C)
- (e) Melting point/freezing point: -100 °C
- (f) Initial boiling point and boiling range: 157 °C (1013 hPa)
- (g) Flash point: 68 °C
- (h) Evaporation rate: no data available
- (i) Flammability (solid, gas): Combustible liquid
- (j) Flammability or explosive limits
  - Lower explosion limit: 2.3 % (v/v)
  - Upper explosion limit: 18 % (v/v)
- (k) Vapour pressure: 0.76 hPa (20 °C)
- (l) Vapour density: 2.69 (20 °C)
- (m) Relative density: 1.114 g/cm<sup>3</sup> (20 °C)
- (n) Solubility(ies)
  - Water solubility (g/L): soluble (20 °C)
  - Soluble (g/L) in Ethanol: no data available
- (o) Partition coefficient: n-octanol/water: -0.326 (20 °C)
- (p) Auto-ignition temperature: 295 °C (DIN 51794)

(q) Decomposition temperature:	157 °C (1013 hPa)
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	3.4 mPa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

**Other information**

Bulk density:	no data available
Refraction index:	1.4963 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

**SECTION 10. -----STABILITY AND REACTIVITY -----**

**Reactivity**

no data available

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

no data available

**Incompatible materials**

no data available

**Hazardous decomposition products**

no data available

**Additional information**

no data available

**SECTION 11. ----- TOXICOLOGICAL INFORMATION -----**

**Information on toxicological effects**

**Acute effects**

Acute oral toxicity:

LD50: < 98 mg/kg - Rat - (OECD 401)

Acute dermal toxicity:

LD50: < 112 mg/kg - Rabbit - (Merck KGaA)

Acute inhalation toxicity:

no data available

**Irritant and corrosive effects**

Primary irritation to the skin:

Causes skin irritation.

Irritation to eyes:

Causes serious eye damage.

Irritation to respiratory tract:  
not applicable

**Respiratory or skin sensitization**

In case of skin contact: not sensitising  
In case of inhalation: not sensitising

**STOT-single**

**exposure** not  
applicable

**STOT-repeated**

**exposure** not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**Additional information**

no data available

**SECTION 12. ----- ECOLOGICAL INFORMATION -----**

**Ecotoxicity**

**Fish toxicity:**

no data available

**Daphnia toxicity:**

no data available

**Algae toxicity:**

no data available

**Bacteria toxicity:**  
no data available

**Persistence and degradability**  
no data available

**Bioaccumulative potential**  
Partition coefficient: n-octanol/water: -0.326 (20 °C)

**Mobility in soil:**  
no data available

**Results of PBT/vPvB assessment**  
This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

**Other adverse effects**  
no data available

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

**Waste treatment methods**

**Appropriate disposal / Product**

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Send to a hazardous waste incinerator facility under observation of official regulations.

Waste code product: no data available

**Appropriate disposal / Package**

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

**Additional information** no data available

**SECTION 14. ----- TRANSPORT INFORMATION -----**

**Land transport (TDG)**

UN-No.:	2966
Proper Shipping Name:	THIOGLYCOL
Class(es):	6.1
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

**Sea transport (IMDG)**

UN-No.:	2966
Proper Shipping Name:	THIOGLYCOL
Class(es):	6.1
Classification code:	
Hazard label(s):	6.1
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	



Segregation group: -  
EmS-No. F-A S-A  
Transport in bulk according to Annex II of MARPOL 73/78 and  
the IBC Code not relevant

**Air transport (ICAO-TI / IATA-DGR)**

UN-No.: 2966  
Proper Shipping Name: THIOGLYCOL  
Class(es): 6.1  
Classification code:  
Hazard label(s): 6.1  
Packing group: II  
Special precautions for user:

**SECTION 15. ----- REGULATORY INFORMATION -----**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**SECTION 16. ----- OTHER INFORMATION -----**

Further information: no limited for paper copy, just for internal uses.  
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

**Disclaimer**

The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**Issuing Date:** 23-Oct-2020

**End of SDS**