

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2022

Date Updated: December 31, 2022

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

Product Name	2-Mercaptoethanol
Product Code(s)	MB0338
Recommended Use	Strictly For Laboratory Research Use Only Not for Human or Animal Drug Use
Supplier	Bio Basic Asia Pacific Pte Ltd.
Address	2 International Business Park Road Strategy #01-04, Singapore 609930
Telephone	(+65) 6954 2519 (+65) 6491 5938
Email	sg@biobasic-asia.com

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

GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)

Flammable Liquid (Category 4), H227
Acute Toxicity, Dermal (Category 1), H310
Acute Toxicity, Inhalation (Category 2), H330
Acute Toxicity, Oral (Category 3), H301
Skin Irritation (Category 2), H315
Serious Eye Damage (Category 1), H318

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

GHS Label elements, including precautionary statements

Pictogram



Signal word	Danger
Hazard statement(s)	
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 statement(s)

Prevention	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P243	Take precautionary measures against static discharge
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
P284	Wear respiratory protection

Response

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.

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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

Storage

P403+P233

Store in a well-ventilated place. Keep container tightly closed.

Disposal

- -

Hazards not otherwise classified (HNOC) or not covered by GHS - none

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

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

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

General advice

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.

If inhaled

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

Remove contaminated clothing and shoes. Wash off with soap and plenty of water. In case of skin reactions, take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water for 15 minutes. Remove any contact lenses. Protect uninjured eye. Continue to wash for at least 10 minutes. Get medical attention.

If swallowed

Immediately call a POISON CENTER/doctor. Do not induce vomiting unless directed to do so by medical personnel. Rinse mouth thoroughly with water. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Conditions of flammability

No data available

Suitable extinguishing media

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

Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide & Sulfur oxides

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Advice for firefighters

DO NOT fight fire when fire reaches explosives. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

Further 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.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

Personal precautions, protective equipment and emergency procedures

In case of major fire and large quantities: Remove people to safety
For personal protection see section 8.

Environmental precautions

Discharge into the environment must be avoided

Methods and materials 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. Clear spills immediately.

Reference to other sections

For disposal see section 13.

SECTION 7. ----- HANDLING AND STORAGE-----

Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid contact with eyes and skin. If not handled under hood, 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.
For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Recommended storage temperature: Store between 15 °C and 30 °C. Keep container tightly closed and in well-ventilated place.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

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

Control Parameters

Exposure Limit

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

Engineering measures

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 protective equipment

Eye/face protection

Avoid contact with eyes. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves

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Short-term contact material: Nitrile rubber (NBR)
Minimum layer thickness: 0.12mm
Breakthrough time: 10 - 30min

Long-term contact material: Butyl caoutchouc (butyl rubber)
Minimum layer thickness: 0.30mm
Break through time: >480min

Body Protection

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Required when dusts are generated or irritation is experienced. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Hygiene Measures

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.

Control of environmental exposure

No data available

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

Information on basic physical and chemical properties

Appearance	Form: Liquid Colour: Colourless
Odour	No data available
Odour Threshold	No data available
pH	4.5 – 6 at 500g/l at 20°C, H ₂ O
Melting point/freezing point	-100°C
Initial boiling point and boiling range	157°C (1013 hPa)
Flash point	68°C
Evaporation rate	No data available
Flammability (solid, gas)	Combustible liquid
Upper/lower flammability or explosive limits	Lower explosion limit: 2.3 % (v/v) Upper explosion limit: 18% (v/v)
Vapour pressure	0.76hPa (20°C)
Vapour density	2.69 (20°C)
Relative density	1.114g/cm ³ (20°C)
Water solubility	Soluble (20°C)
Partition coefficient: n-octanol/water	-0.326 (20 °C)
Auto-ignition temperature	295 °C (DIN 51794)

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Decomposition temperature	157°C (1013hPa)
Dynamic Viscosity	3.4mPa*s (20 °C)
Explosive properties	No data available
Oxidizing properties	No data available
Refraction index	1.4963 (589nm; 20°C)

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

In the event of fire: see section 5

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

Acute toxicity

LD50 Oral - Rat - <98mg/kg

Inhalation: No data available

LD50 Dermal - Rabbit - <112mg/kg

Skin corrosion/irritation

Causes skin irritation

Serious eye damage/eye irritation

Causes serious eye damage

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No indications

Carcinogenicity

No data available

Reproductive toxicity

No indications

Specific target organ toxicity - single exposure

May cause respiratory irritation

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

No data available

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To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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

Toxicity

No data available

Persistence and degradability

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

No data available

Other adverse effects

No data available

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

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.

Contaminated packaging

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

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

TDG

UN number: 2966 Class: 6.1 Packing group: II

Proper shipping name: THIOGLYCOL

Labels: 6.1

ERG Code: No

Marine Pollutant: No

IMDG

UN number: 2966 Class: 6.1 Packing group: II EmS-No.: F-A S-A

Proper shipping name: THIOGLYCOL

Labels: 6.1

ERG Code: No

Marine Pollutant: No

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant

IATA

UN number: 2966 Class: 6.1 Packing group: II

Proper shipping name: THIOGLYCOL

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.

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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: 31-Dec-2022

End of SDS