



**2-Mercapto Ethanol  
CAS No 60-24-2**

**MATERIAL SAFETY DATA SHEET  
SDS/MSDS**

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

**1.1 Product identifiers**

Product name : 2-Mercapto Ethanol

CAS-No. : 60-24-2

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi-10002  
INDIA

Telephone : +91 11 49404040  
Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 3), H331  
Acute toxicity, Dermal (Category 2), H310  
Skin irritation (Category 2), H315  
Serious eye damage (Category 1), H318  
Skin sensitisation (Category 1), H317  
Specific target organ toxicity - repeated exposure, Oral (Category 2), Liver, Heart, H373  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

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

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

T, N Toxic, Dangerous for the environment R23/24/25, R38, R41, R43, R48/22, R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram

Signal word



Hazard statement(s)

H301 + H331

H310

H315

H317

H318

H373

H410

Precautionary statement(s)

P261

P280

P301 + P310 + P330

P302 + P352 + P310

P305 + P351 + P338 + P310

P403 + P233

Supplemental Hazard

Statements

Danger

Toxic if swallowed or if inhaled

Fatal in contact with skin.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye damage.

May cause damage to organs (Liver, Heart) through prolonged or repeated exposure if swallowed.

Very toxic to aquatic life with long lasting effects.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.

IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER or doctor/ physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

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

none

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Stench.

Stench., Rapidly absorbed through skin.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Thioethylene glycol  
2-Hydroxyethylmercaptan  
BME  
-Mercaptoethanol

Formula : C<sub>2</sub>H<sub>6</sub>OS  
Molecular weight : 78,13 g/mol  
CAS-No. : 60-24-2  
EC-No. : 200-464-6

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>2-Mercaptoethanol</b>		
CAS-No.	60-24-2	Acute Tox. 3; Acute Tox. 2; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H301 + H331, H310, H315, H317, H318, H373, H410
EC-No.	200-464-6	

#### Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
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## 2-Mercaptoethanol

CAS-No.	60-24-2	T, N, R23/24/25 - R38 - R41 -	<= 100 %
EC-No.	200-464-6	R43 - R48/22 - R50/53	

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, Sulphur oxides

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.

### SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### 6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.



b) Odour	Stench.
c) Odour Threshold	No data available
d) pH	4,5 - 6 at 500 g/l at 20 °C
e) Melting point/freezing point	< -49,99 °C
f) Initial boiling point and boiling range	157 °C - lit.
g) Flash point	74 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 18 %(V) Lower explosion limit: 2,3 %(V)
k) Vapour pressure	0,76 hPa at 20 °C 4,67 hPa at 40 °C
l) Vapour density	2,70 - (Air = 1.0)
m) Relative density	1,114 g/cm <sup>3</sup> at 25 °C
n) Water solubility	soluble
o) Partition coefficient: n-octanol/water	log Pow: -0,326 log Pow: -0,056 at 25 °C
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

## 9.2 Other safety information

Relative vapour density 2,70 - (Air = 1.0)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Metals, Oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available  
In the event of fire: see section 5

## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute toxicity

LD50 Oral - Rat - 98 - 162 mg/kg  
(OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - 2 mg/l

LC50 Inhalation - Rat - 4 h - 625 ppm

LD50 Dermal - Rabbit - 112 mg/kg

### Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin.  
(Draize Test)

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes.

### Respiratory or skin sensitisation

Maximisation Test (GPMT) - Guinea pig  
May cause sensitisation by skin contact.  
(OECD Test Guideline 406)

### Germ cell mutagenicity

Experiments showed mutagenic effects in cultured bacterial cells.

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

No data available

### Specific target organ toxicity - single exposure

No data available

### Specific target organ toxicity - repeated exposure

Ingestion - May cause damage to organs through prolonged or repeated exposure. - Liver, Heart

### Aspiration hazard

No data available

### Additional Information

RTECS: KL5600000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Weakness, Unconsciousness, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema

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

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish

Toxicity to daphnia and other aquatic invertebrates      LC50 - Leuciscus idus (Golden orfe) - 46 - 100 mg/l - 96,0 h  
EC50 - Daphnia (water flea) - 0,89 mg/l - 48 h  
(OECD Test Guideline 202)

Toxicity to algae

Toxicity to bacteria      EC50 - Desmodesmus subspicatus (green algae) - 12 mg/l - 72 h  
LC50 - Bacteria - 125 mg/l - 17 h

## 12.2 Persistence and degradability

Biodegradability      Result: < 30,0 % - Not readily biodegradable.  
Result: 6 % - Not readily biodegradable.  
aerobic - Exposure time 28 d  
Result: < 10 % - Not readily biodegradable.

Biochemical Oxygen Demand (BOD)      105 mg/g

Chemical Oxygen Demand (COD)      1,894 mg/g

## 12.3 Bioaccumulative potential

Does not accumulate in organisms.

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2966

IMDG: 2966

IATA: 2966

### 14.2 UN proper shipping name

ADR/RID: THIOGLYCOL

IMDG: THIOGLYCOL

IATA: Thioglycol

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

### 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

### 14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

### 14.6 Special precautions for user

No data available

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage
H301	Toxic if swallowed.
H301 + H331	Toxic if swallowed or if inhaled
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	Very toxic to aquatic life.

### Full text of R-phrases referred to under sections 2 and 3

N	Dangerous for the environment
T	Toxic
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.