

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Thiomorpholine

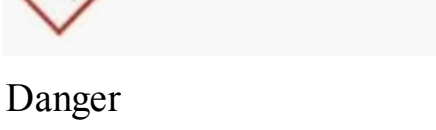
2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008  
Skin corrosion (Category 1B)

According to European Directive 67/548/EEC as amended.  
Causes burns. Irritating to respiratory system.

Label elements

|                                                                  |                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pictogram                                                        |                                                                                                                                                                                        |
| Signal word                                                      | Danger                                                                                                                                                                                                                                                                  |
| Hazard statement(s)<br>H314                                      | Causes severe skin burns and eye damage.                                                                                                                                                                                                                                |
| Precautionary statement(s)<br>P280<br>P305 + P351 + P338<br>P310 | Wear protective gloves/protective clothing/eye protection/face protection.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>Immediately call a POISON CENTER or doctor/physician. |
| Hazard symbol(s)<br>C                                            | Corrosive                                                                                                                                                                                                                                                               |
| R-pharse(s)<br>R34<br>R37                                        | Causes burns.<br>Irritating to respiratory system.                                                                                                                                                                                                                      |
| S-pharse(s)<br>S26                                               | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.                                                                                                                                                                           |
| S36/37/39<br>S45                                                 | Wear suitable protective clothing, gloves and eye/face protection.<br>In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).                                                                                       |

Other hazards

Stench.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Tetrahydro-2H-1,4-thiazine  
Thiamorpholine

Formula : C4H9NS  
Molecular Weight : 103,19 g/mol

| CAS-No.                           | EC-No.    |   | Classification                      | Concentration |
|-----------------------------------|-----------|---|-------------------------------------|---------------|
| <b>Thiazolidinane</b><br>123-90-0 | 204-660-2 | - | Skin Corr. 1B; H314<br>C, R34 - R37 | -             |

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

4. 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. 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.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapour or mist.  
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
  
Handle and store under inert gas. Air sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

|        |               |
|--------|---------------|
| Form   | clear, liquid |
| Colour | light yellow  |

Safety data

|                       |                      |
|-----------------------|----------------------|
| pH                    | no data available    |
| Melting point         | no data available    |
| Boiling point         | 169 °C - lit.        |
| Flash point           | 63 °C - closed cup   |
| Ignition temperature  | no data available    |
| Lower explosion limit | no data available    |
| Upper explosion limit | no data available    |
| Density               | 1,026 g/cm3 at 25 °C |
| Water solubility      | no data available    |

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong bases, Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Sulphur oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

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

no data available

Aspiration hazard

no data available

Potential health effects

|                   |                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b> | May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. |
| <b>Ingestion</b>  | May be harmful if swallowed. Causes burns.                                                                                      |
| <b>Skin</b>       | May be harmful if absorbed through skin. Causes skin burns.                                                                     |
| <b>Eyes</b>       | Causes eye burns.                                                                                                               |

Signs and Symptoms of Exposure

Nausea, Headache, Vomiting, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough

Additional Information

RTECS: no data available

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 3267 Class: 8 Packing group: III  
Proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Thiazolidinane)

IMDG

UN-Number: 3267 Class: 8 Packing group: III EMS-No: F-A, S-B  
Proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Thiazolidinane)

Marine pollutant: No

IATA

UN-Number: 3267 Class: 8 Packing group: III  
Proper shipping name: Corrosive liquid, basic, organic, n.o.s. (Thiazolidinane)

15. REGULATORY INFORMATION

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

16. OTHER INFORMATION

Text of H-code(s) and R-pharse(s) mentioned in Section 3

|            |                                          |
|------------|------------------------------------------|
| H314       | Causes severe skin burns and eye damage. |
| Skin Corr. | Skin corrosion                           |
| C          | Corrosive                                |
| R34        | Causes burns.                            |
| R37        | Irritating to respiratory system.        |

Further information

For R&D use only. Not for drug, household or other uses.  
WARRANTY:

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. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.