



TCI (Shanghai) DEVELOPMENT CO., LTD.

Revision number: 2

Revision date: 09/06/2019

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## SAFETY DATA SHEET

### 1. IDENTIFICATION

**Product name:** N-(2-Hydroxypropyl)morpholine  
**Product code:** H0437  
**Company:** TCI (Shanghai) DEVELOPMENT CO., LTD.  
**Address:** No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China  
**Responsible Department:** Sales Department  
**Telephone:** +86-(0)21-67121386  
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**Revision number:** 2

### 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

#### PHYSICAL HAZARDS

Flammable liquids Category 4

#### HEALTH HAZARDS

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2A

#### ENVIRONMENTAL HAZARDS

Not classified

Label elements

Pictograms or hazard symbols



Signal word

Warning

Hazard statements

Combustible liquid  
Causes skin irritation  
Causes serious eye irritation

Precautionary statements

[Prevention]

Keep away from flames and hot surfaces. – No smoking.  
Wash hands and face thoroughly after handling.  
Wear protective gloves, eye protection.

[Response]

IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

[Storage]

In case of fire: Use dry chemical, dry sand or foam to extinguish.  
Store in a well-ventilated place. Keep cool.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Substance/mixture:</b>	Substance
<b>Components:</b>	N-(2-Hydroxypropyl)morpholine
<b>Percent:</b>	>98.0%(GC)
<b>CAS RN:</b>	2109-66-2
<b>Synonyms:</b>	1-Morpholino-2-propanol
<b>Chemical Formula:</b>	C <sub>7</sub> H <sub>15</sub> NO <sub>2</sub>

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
<b>Skin contact:</b>	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion:</b>	Get medical advice/attention if you feel unwell. Rinse mouth.
<b>Protection of first-aiders:</b>	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

### 5. FIRE-FIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Dry chemical, foam, water spray, carbon dioxide.
<b>Unsuitable extinguishing media:</b>	Solid streams of water
<b>Specific hazards arising from the chemical:</b>	Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.
<b>Precautions for firefighters:</b>	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.
<b>Special protective equipment for firefighters:</b>	When extinguishing fire, be sure to wear personal protective equipment

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
<b>Environmental precautions:</b>	Prevent product from entering drains.
<b>Methods and materials for containment and cleaning up:</b>	Absorb spilled material in a suitable absorbent (e.g. rag, dry sand, earth, saw-dust). In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
<b>Prevention of secondary hazards:</b>	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical measures:** Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from flames and hot surfaces. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

**Advice on safe handling:** Avoid contact with skin, eyes and clothing.

### Conditions for safe storage, including any incompatibilities

**Storage conditions:** Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store under inert gas. Protect from moisture. Store away from incompatible materials such as oxidizing agents. Hygroscopic

**Packaging material:** Comply with laws.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering controls:** Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also install safety shower and eye bath.

### **Personal protective equipment**

**Respiratory protection:** Vapor respirator. Follow local and national regulations.

**Hand protection:** Protective gloves.

**Eye protection:** Safety glasses. A face-shield, if the situation requires.

**Skin and body protection:** Protective clothing. Protective boots, if the situation requires.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state (20°C):** Liquid  
**Form:** Clear  
**Colour:** Colorless - Pale yellow  
**Odour:** No data available  
**pH:** No data available  
**Melting point/freezing point:** No data available  
**Boiling point/range:** 218°C  
**Flash point:** 92°C  
**Flammability or explosive limits:**  
**Lower:** No data available  
**Upper:** No data available  
**Relative density:** 1.02  
**Solubility(ies):**  
**[Water]** No data available  
**[Other solvents]** No data available  
**Autoignition temperature:** 250°C

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Stable under proper conditions.

**Possibility of hazardous reactions:** No special reactivity has been reported.

**Conditions to avoid:** Open flame

**Incompatible materials:** Oxidizing agents

**Hazardous decomposition products:** Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx)

## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity:</b>	No data available
<b>Skin corrosion/irritation:</b>	No data available
<b>Serious eye damage/irritation:</b>	No data available
<b>Germ cell mutagenicity:</b>	No data available
<b>Carcinogenicity:</b>	
<b>IARC =</b>	No data available
<b>NTP =</b>	No data available
<b>Reproductive toxicity:</b>	No data available

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	
<b>Fish:</b>	No data available
<b>Crustacea:</b>	No data available
<b>Algae:</b>	No data available
<b>Persistence / degradability:</b>	No data available
<b>Bioaccumulative potential(BCF):</b>	No data available
<b>Mobility in soil</b>	
<b>Log Pow:</b>	No data available
<b>Soil adsorption (Koc):</b>	No data available
<b>Henry's Law (PaM<sup>3</sup>/mol):</b>	No data available

## 13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

## 14. TRANSPORT INFORMATION

<b>Hazards Class:</b>	Does not correspond to the classification standard of the United Nations
<b>UN-No:</b>	Not listed

## 15. REGULATORY INFORMATION

**Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011):** Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

## 16. OTHER INFORMATION

### The reference company name of written contents

<b>Company:</b>	TCI (Shanghai) DEVELOPMENT CO., LTD.
<b>Address:</b>	No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China
<b>Department:</b>	Technical Information Department
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This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority.

The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.