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## **MATERIAL SAFETY DATA SHEET**

### **MORPHOLINE**

**(Extra Pure)**

**MSDS CAS : 110-91-8**

#### **Section 1: Chemical Product and Company Identification**

##### **Section 1: Chemical Product**

**Product Name : MORPHOLINE**

**CAS#: 110-91-8**

**C.I. No.: Not available.**

**Synonym : Not available.**

**Chemical Name: Not available.**

**Chemical Formula: Not available.**

**Brand: OXFORD**

##### **Details Of The Supplier Of The Safety Data Sheet:**

**Company identification: OXFORD LAB FINE CHEM LLP**  
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,  
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#### **Section 2: Composition and Information on Ingredients**

##### **Composition:**

Name	CAS #	% by Weight
MORPHOLINE	110-91-8	100

## Section 3: Hazards Identification

### Classification of the substance or mixture

Classification according to Regulation (EC) No 1999/45

Classification : R10  
Xn; R20/21/22  
C; R34

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332  
Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302  
Serious eye damage - Category 1 - Danger (CLP : Eye Dam. 1) H318  
Acute toxicity, dermal - Category 4 - Warning (CLP : Acute Tox. 4) H312  
Skin corrosion - Category 1B - Danger (CLP : Skin Corr. 1B) H314

Physical hazards : Flammable liquids - Category 3 - Warning (CLP : Flam. Liq. 3) H226

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

## Section 4: First Aid Measures

### Description of first aid measures

#### Inhalation

Specific treatment is urgent (see on this label). Immediately call a POISON CENTER or doctor. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

#### Skin contact

Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Specific treatment (see on this label).

#### Eye contact

Rinse cautiously with water for several minutes. Specific treatment (see on this label). Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor..

**Ingestion** : Obtain emergency medical attention. Do NOT induce vomiting. Rinse mouth.

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

**Symptoms relating to use** : Causes severe skin burns and eye damage.  
Causes serious eye damage.

## Section 4: First Aid Measures (Continued)

Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Danger of serious damage to health by prolonged exposure through inhalation.

Swallowing a small quantity of this material will result in serious health hazard. Corrosive to respiratory tract.

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

**General information :** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

## Section 5: Fire and Explosion Data

### Extinguishing media

#### Extinguishing media

**Suitable extinguishing media** : Foam, Dry powder, Carbon dioxide, Water spray, Sand.

**Unsuitable extinguishing media** : Do not use a heavy water stream.

**Surrounding fires** : Use water spray or fog for cooling exposed containers.

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

**Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.  
Thermal decomposition generates : Corrosive vapours.

#### Advice for fire-fighters

**Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.

#### Special procedures

: Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

## Section 6: Accidental Release Measures

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

**For emergency responders** : Equip cleanup crew with proper protection.  
Ventilate area.

**Technical measures** : Use special care to avoid static electric charges.

## Section 6: Accidental Release Measures (Continued)

- Special precautions** : Remove ignition sources. No naked lights. No smoking.
- For non-emergency personnel** : Evacuate unnecessary personnel.
- Environmental precautions**
- Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
- Methods and materials for containment and cleaning up**
- Clean up methods** : Soak up spills with inert solids, such as clay or diatomaceous Earth as soon as possible. Collect spillage. Store away from other Materials.

## Section 7: Handling and Storage

### Precautions for safe handling

- Handling** : Handle empty containers with care because residual vapours are flammable. Take precautionary measures against static discharge. Use only outdoors or in a wellventilated area. Wash contaminated clothing before reuse. Wash thoroughly after handling. Do not breathe dust, fume, gas, mist, vapours, spray. Do not eat, drink or smoke when using this product.
- Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, equipment. Use only nonsparking tools.
- Special precautions** : No naked lights. No smoking.

### Conditions for safe storage, including any incompatibilities

- Storage** : Keep only in the original container in a cool, well ventilated place. Do not store in corrodable metal. Keep in fireproof place. Ground/bond container and receiving equipment. Keep container tightly closed.
- Storage regulation** : Comply with applicable regulations.
- Storage - away from** : Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

### Specific end uses

- Specific end use(s)** : None.

## Section 8: Exposure Controls/Personal Protection

### Personal protection

- Respiratory protection : Avoid all unnecessary exposure.  
: In case of insufficient ventilation, wear suitable respiratory equipment.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or face shield.
- Others : When using, do not eat, drink or smoke.

### Control parameters

Occupational Exposure Limits : No data available.

## Section 9: Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state at 20 °C	: Liquid
Color	: Clear Colourless
Odor	: Characteristic ammonia odor
Odor threshold	: No data available.
pH value	: Not Applicable.
Melting point [°C]	: -7 - -5 °C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: 3100C
Flammability (solid, gas)	: Flammable liquid and vapor.
Flash point [°C]	: 31 °C
Boiling point [°C]	: 126 - 130 °C
Initial boiling point [°C]	: 126 °C
Final boiling point [°C]	: 130 °C
Evaporation rate	: N/A
Vapor pressure [20°C]	: 9 h Pa at 20 °C
Vapor pressure mm/Hg	: N/A
Vapor density	: 3, 01
Density [g/cm <sup>3</sup> ]	: 0,996
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Completely miscible

## Section 9: Physical and Chemical Properties(Continued)

Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 10.6
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

### Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: 10, 80 %
Explosion limits - lower [%]	: 1, 80 %
Oxidizing properties	: No data available.

## Section 10: Stability and Reactivity Data

### Reactivity

Reactivity : Not established.

### Chemical stability

Chemical stability : Stable under recommended storage conditions.

### Possibility of hazardous reactions

Hazardous reactions : Not established.

### Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

### Incompatible materials

Materials to avoid : Strong acids. Strong bases.

### Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.  
Thermal decomposition generates : Corrosive vapors.  
May release flammable gases.

## Section 11: Toxicological Information

### Information on toxicological effects

#### Acute toxicity

- Inhalation : Harmful if inhaled.
  - Dermal : Harmful in contact with skin.
  - Ingestion : Harmful if swallowed.
- Corrosion : Causes severe skin burns and eye damage.  
: Corrosive to respiratory tract.

#### Irritation

- : Based on available data, the classification criteria are not met.  
: Based on available data, the classification criteria are not met.

#### Sensitization

- : Based on available data, the classification criteria are not met.

#### Mutagenicity

- : Based on available data, the classification criteria are not met.

#### Carcinogenicity

- : Based on available data, the classification criteria are not met.

#### Toxic for reproduction

- : Based on available data, the classification criteria are not met.

#### STOT-single exposure

- : Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

- : Based on available data, the classification criteria are not met.

#### Aspiration hazard

- : Based on available data, the classification criteria are not met.

## Section 12: Ecological Information

### Toxicity

Toxicity information : Not established.

### Persistence – degradability

Persistence - degradability : Biodegradable.

### Bioaccumulative potential

Bioaccumulative potential : Not established.

### Mobility in soil

Mobility in soil : Not established.

## Section 12: Ecological Information (Continued)

### Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment :** The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

### Other adverse effects

**Environmental precautions :** Avoid release to the environment.

## Section 13: Disposal Considerations

### Waste treatment methods

**General :** Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**Special precautions :** Handle empty containers with care because residual vapours are flammable.

## Section 14: Transport Information

### Land transport (ADR-RID)

Proper shipping name	: MORPHOLINE
UN N°	: 2054
H.I. nr	: 883
ADR – Class	: 8
Labelling – Transport	: 8 : Corrosive substance.3 : Flammable liquid.
ADR - Group	: I

### Sea transport (IMDG) [English only]

Proper shipping name	: MORPHOLINE
UN N°	: 2054
IMO-IMDG - Class or division	: 8 : Corrosive substance.3 : Flammable liquid.
IMO-IMDG - Packing group	: I

## Section 14: Transport Information (Continued)

### Air transport (ICAO-IATA) [English only]

Proper shipping name	: MORPHOLINE
UN N°	: 2054
IATA - Class or division	: 8 : Corrosive substance. 3 : Flammable liquid.
IATA - Packing group	: I

## Section 15: Other Regulatory Information

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

**Safety, health and environmental regulations/legislation specific for the substance or mixture :** Ensure all national/local regulations are observed.

**REACH Restrictions - Annex XVII :** The components of this product are not subject to restrictions.

**REACH Authorisation - Annex XIV :** The components of this product are not subject to authorization.

### Chemical Safety Assessment

**Chemical Safety Assessment :** It has not been carried out.

## Section 16 - Additional Information

**References:** Not available.

**Other Special Considerations:** Not available.

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