

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : **MOPS**

Product Number : M1254  
Brand : Sigma

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 3-(N-Morpholino)propanesulfonic acid  
4-Morpholinepropanesulfonic acid

Formula : C7H15NO4S  
Molecular Weight : 209.26 g/mol

CAS-No.	EC-No.	Index-No.	Concentration [%]
<b>4-Morpholinopropanesulphonic acid</b>			
1132-61-2	214-478-5	-	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

Irritant

#### HMIS Classification

Health Hazard: 2

Flammability: 1

Physical hazards: 0

#### NFPA Rating

Health Hazard: 2

Fire : 1

Reactivity Hazard: 0

#### Potential Health Effects

##### Inhalation

May be harmful if inhaled. May cause respiratory tract irritation.

##### Skin

May be harmful if absorbed through skin. May cause skin irritation.

**Eyes**  
**Ingestion**

May cause eye irritation.  
May be harmful if swallowed.

#### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**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. 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**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

**Flammable properties**

Flash point 110 °C (230 °F) - closed cup

Ignition temperature no data available

**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 dust formation. Avoid breathing dust. Ensure adequate ventilation.

**Environmental precautions**

Do not let product enter drains.

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Storage**

Keep container tightly closed in a dry and well-ventilated place.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves.

**Eye protection**

Safety glasses

**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 powder

Colour white

**Safety data**

pH 2.5 - 4 at 209 g/l at 25 °C (77 °F)

Melting point 277 °C (531 °F)

Boiling point no data available

Flash point 110 °C (230 °F) - closed cup

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Water solubility 209 g/l at 20 °C (68 °F) - completely soluble

**10. STABILITY AND REACTIVITY****Storage stability**

Stable under recommended storage conditions.

**Materials to avoid**

Strong oxidizing agents, Strong bases

**Hazardous decomposition products****Hazardous decomposition products formed under fire conditions.**

Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - rat - > 2,000 mg/kg

**Irritation and corrosion**

no data available

**Sensitisation**

no data available

**Chronic exposure**

no data available

### Signs and Symptoms of Exposure

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

### Potential Health Effects

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.

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## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h

### Further information on ecology

no data available

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## 13. DISPOSAL CONSIDERATIONS

### Product

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.

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## 14. TRANSPORT INFORMATION

### DOT (US)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

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## 15. REGULATORY INFORMATION

### OSHA Hazards

Irritant

### TSCA Status

On TSCA Inventory

### DSL Status

All components of this product are on the Canadian DSL list.

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

No Components Listed

**Pennsylvania Right To Know Components**

4-Morpholinopropanesulphonic acid

CAS-No.  
1132-61-2

Revision Date

**New Jersey Right To Know Components**

4-Morpholinopropanesulphonic acid

CAS-No.  
1132-61-2

Revision Date

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

**16. OTHER INFORMATION****Further information**

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