

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : **MES**

Product Number : M3671  
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 : 2-(N-Morpholino)ethanesulfonic acid  
4-Morpholineethanesulfonic acid

Formula : C<sub>6</sub>H<sub>13</sub>NO<sub>4</sub>S  
Molecular Weight : 195.20 g/mol

CAS-No.	EC-No.	Index-No.	Concentration [%]
<b>2-Morpholinoethanesulphonic acid</b>			
4432-31-9	224-632-3	-	-

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

##### OSHA Hazards

No OSHA Hazards

#### HMIS Classification

Health Hazard: 0

Flammability: 0

Physical hazards: 0

#### NFPA Rating

Health Hazard: 0

Fire : 0

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

**If inhaled**

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

**In case of skin contact**

Wash off with soap and plenty of water.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

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

#### 5. FIRE-FIGHTING MEASURES

**Flammable properties**

Flash point                      no data available

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**

Avoid dust formation.

**Environmental precautions**

Do not let product enter drains.

**Methods for cleaning up**

Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### 7. HANDLING AND STORAGE

**Handling**

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**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

For prolonged or repeated contact use protective gloves.

**Eye protection**

Safety glasses

**Hygiene measures**

General industrial hygiene practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form powder  
Colour white

**Safety data**

pH 2.5 - 4 at 97.6 g/l at 25 °C (77 °F)  
Melting point 300 °C (572 °F)  
Boiling point no data available  
Flash point no data available  
Ignition temperature no data available  
Lower explosion limit no data available  
Upper explosion limit no data available  
Water solubility 97.6 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

**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**

no data available

**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**

**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.

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

## 15. REGULATORY INFORMATION

### OSHA Hazards

No OSHA Hazards

### 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

2-Morpholinoethanesulphonic acid

CAS-No.  
4432-31-9

Revision Date

**New Jersey Right To Know Components**

2-Morpholinoethanesulphonic acid

CAS-No.  
4432-31-9

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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