1. PRODUCT AND COMPANY IDENTIFICATION

Product name : EPPS
Product Number : E9502
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 : N-(2-Hydroxyethyl)piperazine-N’-(3-propanesulfonic acid)
            4-(2-Hydroxyethyl)piperazine-1-propanesulfonic acid
HEPPS
            4-(2-Hydroxyethyl)-1-piperazinopropanesulphonic acid
Formula : C₉H₂₀N₂O₄S
Molecular Weight : 252.33 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>4-(2-Hydroxyethyl)-1-piperazinopropanesulphonic acid</td>
<td>16052-06-5</td>
<td>240-198-8</td>
<td>-</td>
</tr>
</tbody>
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3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
No known 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.
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.

Keep in a dry 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**: beige

### Safety data
- **pH**: no data available
- **Melting point**: 237 - 239 ºC (459 - 462 ºF)
- **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**: ca.25.2 g/l at 20 ºC (68 ºF)

## 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 (NOx), Sulphur oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity
no data available

### Irritation and corrosion
no data available

### Sensitisation
no data available

### Chronic exposure
- **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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

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 May cause eye irritation.
Ingestion May be harmful if swallowed.

Additional Information
RTECS: TM2649130

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 known OSHA hazards
DSL Status
This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

- 4-(2-Hydroxyethyl)-1-piperazinepropanesulphonic acid
  CAS-No. 16052-06-5

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
No SARA Hazards

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

- 4-(2-Hydroxyethyl)-1-piperazinepropanesulphonic acid
  CAS-No. 16052-06-5

New Jersey Right To Know Components

- 4-(2-Hydroxyethyl)-1-piperazinepropanesulphonic acid
  CAS-No. 16052-06-5

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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