1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Tris(hydroxymethyl)aminomethane
Product Number: 252859
Brand: Sigma Aldrich
Company: Sigma Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +1 800-325-5822
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Tris base, Tris(hydroxymethyl)aminomethane
Formula: C4H11NO3
Molecular Weight: 121.14 g/mol

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-86-1</td>
<td>201-064-4</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Irritant

HMIS Classification
Health Hazard: 2
Flammability: 0
Physical hazards: 0

NFPA Rating
Health Hazard: 2
Fire: 0
Reactivity Hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.

4. FIRST AID MEASURES

Ingestion: May be harmful if swallowed.

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: not applicable
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 preventative 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.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**  
- Form: crystalline  
- Colour: colourless  
- White  

**Safety data**  
- pH: 10.5  
- Melting point: 171.2 - 172.3 °C (340.2 - 342.1 °F)  
- Boiling point: 219 - 220 °C (426 - 428 °F) at 13.3 hPa (100 mmHg)  
- Flash point: not applicable  
- Ignition temperature: no data available  
- Lower explosion limit: no data available  
- Upper explosion limit: no data available  
- Water solubility: no data available

### 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)

### 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. Contact a licensed professional waste disposal service to dispose of this material.  

**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**  
Irritant  

**TSCA Status**  
On TSCA Inventory

---

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. Causes respiratory tract irritation.  
- **Skin**: May be harmful if absorbed through skin. Causes skin irritation.  
- **Eyes**: Causes eye irritation.  
- **Ingestion**: May be harmful if swallowed.
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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(Hydroxymethyl)aminoethane free base</td>
<td>77-96-1</td>
<td></td>
</tr>
</tbody>
</table>

New Jersey Right To Know Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(Hydroxymethyl)aminoethane free base</td>
<td>77-96-1</td>
<td></td>
</tr>
</tbody>
</table>

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
Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.