## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>BIS-TRIS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product Number</strong></td>
<td>B7535</td>
</tr>
<tr>
<td><strong>Brand</strong></td>
<td>Sigma</td>
</tr>
<tr>
<td><strong>Company</strong></td>
<td>Sigma-Aldrich</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>3050 Spruce Street, SAINT LOUIS MO 63103 USA</td>
</tr>
<tr>
<td><strong>Telephone</strong></td>
<td>+1 800-325-5832</td>
</tr>
<tr>
<td><strong>Fax</strong></td>
<td>+1 800-325-5052</td>
</tr>
<tr>
<td><strong>Emergency Phone #</strong></td>
<td>(314) 776-6555</td>
</tr>
</tbody>
</table>

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

#### OSHA Hazards

- Irritant

#### GHS Label elements, including precautionary statements

<table>
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<tr>
<th>Pictogram</th>
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<tbody>
<tr>
<td><strong>Signal word</strong></td>
<td>Warning</td>
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**Hazard statement(s)**

- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

**Precautionary statement(s)**

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash skin thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/eye protection/face protection.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment (see supplemental first aid instructions on this label).
- P322 + P313 If skin irritation occurs: Get medical advice/attention.
- P337 + P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container to an approved waste disposal plant.

**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.
- **Ingestion**: May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- **Synonyms**: Bis(2-hydroxyethyl)amino-tris(hydroxymethyl)methane
  2-Bis(2-hydroxyethyl)amino-2-(hydroxymethyl)-1,3-propanediol
  2,2-Bis(hydroxymethyl)-2,2',2''-nitrilotriethanol

- **Formula**: C₈H₁₉NO₅
- **Molecular Weight**: 209.24 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>6976-37-0</td>
<td>230-37-7</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

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

7. HANDLING AND STORAGE

**Precautions for safe 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.
Conditions for safe 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
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 with side-shields conforming to EN166

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 9.5 - 11.0 at 209.2 g/l at 25 °C (77 °F)
Melting point 102 - 103 ºC (216 - 217 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.209.2 g/l at 20 ºC (68 ºF)

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Conditions to avoid
no data available

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION
Acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
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.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure (GHS)
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (GHS)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.

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

Additional Information

12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
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

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

2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol 6976-37-0

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 are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol 6976-37-0

New Jersey Right To Know Components

2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol 6976-37-0

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
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