SAFETY DATA SHEET

1. Identification

Product Name: Bis-Tris Propane
Cat No.: BP2929-25; BP2943-100
CAS-No: 64431-96-5
Synonyms: 1,3-Bis[tris(Hydroxymethyl)methyl- amino]-propane (JustPURE™/Cell Culture Grade)
Recommended Use: Laboratory chemicals.
Uses advised against: Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

Based on available data, the classification criteria are not met

Label Elements
None required

Hazard not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2'-(Propane-1,3-diyldiimino)bis[2-(hydroxymethyl)propane-1,3-diol]</td>
<td>64431-96-5</td>
<td>&gt; 99</td>
</tr>
</tbody>
</table>

4. First-aid measures
Eye Contact  Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact  Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation  Move to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

Ingestion  Do not induce vomiting. Obtain medical attention.

Most important symptoms and effects  No information available.

Notes to Physician  Treat symptomatically

### 5. Fire-fighting measures

**Suitable Extinguishing Media**  Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable Extinguishing Media**  No information available

**Flash Point**  Not applicable

**Method**  No information available

**Autoignition Temperature**  Not applicable

**Explosion Limits**  No data available

**Upper**

**Lower**

**Sensitivity to Mechanical Impact**  No information available

**Sensitivity to Static Discharge**  No information available

**Specific Hazards Arising from the Chemical**  Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**  Carbon monoxide (CO) Carbon dioxide (CO₂) Nitrogen oxides (NOₓ)

**Protective Equipment and Precautions for Firefighters**  As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**  Health  Flammability  Instability  Physical hazards

|   | 1 | 1 | 1 | N/A |

### 6. Accidental release measures

**Personal Precautions**  Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.

**Environmental Precautions**  Avoid release to the environment.

**Methods for Containment and Clean Up**  Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.

### 7. Handling and storage

**Handling**  Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothing.

**Storage**  Keep containers tightly closed in a dry, cool and well-ventilated place. Handle under nitrogen and protect from moisture.
8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment
Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Powder Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>164 - 165 °C / 327.2 - 329 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits Upper</td>
<td>No data available</td>
</tr>
<tr>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C11H26N2O6</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>282.33</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Hygroscopic.

Conditions to Avoid
Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water.

Incompatible Materials
Strong oxidizing agents
Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NOx)

Hazardous Polymerization: Hazardous polymerization does not occur.

Hazardous Reactions: None under normal processing.

# 11. Toxicological information

## Acute Toxicity

**Product Information**: No acute toxicity information is available for this product

**Component Information**

**Toxicologically Synergistic Products**: No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation**: No information available

**Sensitization**: No information available

**Carcinogenicity**: The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2’-(Propane-1,3-diylidimino)bis[2-(hydroxymethyl)propane-1,3-diol]</td>
<td>64431-96-5</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Mutagenic Effects**: No information available

**Reproductive Effects**: No information available.

**Developmental Effects**: No information available.

**Teratogenicity**: No information available.

**STOT - single exposure**: None known

**STOT - repeated exposure**: None known

**Aspiration hazard**: No information available

**Symptoms / effects, both acute and delayed**: No information available

**Endocrine Disruptor Information**: No information available

**Other Adverse Effects**: The toxicological properties have not been fully investigated.

# 12. Ecological information

**Ecotoxicity**: Do not empty into drains.

**Persistence and Degradability**: Soluble in water. Persistence is unlikely based on information available.

**Bioaccumulation/Accumulation**: No information available.

**Mobility**: Will likely be mobile in the environment due to its water solubility.

# 13. Disposal considerations

**Waste Disposal Methods**: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG/IMO</td>
<td>Not regulated</td>
</tr>
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</table>

15. Regulatory information

**International Inventories**

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>264-899-3</td>
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</tr>
</tbody>
</table>

Legend:
- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

| TSCA 12(b) | Not applicable |
| SARA 313    | Not applicable |
| SARA 311/312 Hazard Categories | See section 2 for more information |
| CWA (Clean Water Act) | Not applicable |
| Clean Air Act | Not applicable |
| OSHA Occupational Safety and Health Administration | Not applicable |
| CERCLA | Not applicable |
| California Proposition 65 | This product does not contain any Proposition 65 chemicals |
| U.S. State Right-to-Know Regulations | Not applicable |

**U.S. Department of Transportation**

- Reportable Quantity (RQ): N
- DOT Marine Pollutant: N
- DOT Severe Marine Pollutant: N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.
Other International Regulations

Mexico - Grade  No information available

16. Other information

Prepared By  Regulatory Affairs
             Thermo Fisher Scientific
             Email: EMSDS.RA@thermofisher.com

Creation Date  02-Mar-2010
Revision Date  18-Jan-2018
Print Date     18-Jan-2018
Revision Summary  This document has been updated to comply with the US OSHA HazCom 2012 Standard
                 replacing the current legislation under 29 CFR 1910.1200 to align with the Globally
                 Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the
date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,
transportation, disposal and release and is not to be considered a warranty or quality specification. The information
relates only to the specific material designated and may not be valid for such material used in combination with any other
materials or in any process, unless specified in the text.

End of SDS