



**SECTION 1 - Chemical Product and Company Identification**

**1.1 Product Identifiers**

Product Name: : Bis-Tris  
 CAS #: : 6976-37-0  
 EC #: : 230-237-7  
 RTECS #: : Not available  
 REACH Registration Number : Not available

**1.2 Recommended Use of the Chemical and Restrictions of Use**

Chemical Manufacturing

**1.3 Supplier Details**

**Supplier:** BioSpectra, Inc. 100 Majestic Way  
 Bangor, PA 18013  
 T: 610.599.3400  
[ra@biospecta.us](mailto:ra@biospecta.us)

**1.4 Emergency Numbers**


**Emergency number:** US & Canada: 1-800-424-9300  
 Outside the US & Canada: +1 703-527-3887

**SECTION 2 – Hazard Identification**

**2.1 Classification of Substance or Mixture**

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
 Serious eye damage (Category 1), H318  
 See section 16 for additional information.

**2.2 GHS Label Elements Including Precautionary Statements**

Pictogram : 

Signal Word : Danger

Hazard statement(s) : H318 - Causes serious eye damage.  
 : P305 + P351 + P 338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 : P310 - Immediately call a POISON CENTER or doctor/ physician.

**2.3 Hazards not Classified or not Covered by the GHS**

None

**SECTION 3 – Composition, Information on Ingredients**

Component	Classification	Concentration
2-[Bis(2-hydroxyethyl)amino]-2-(hydroxymethyl)propane-1,3-diol	Eye Dam. 1; H318	<=100%

Synonyms	:	2-Bis(2-hydroxyethyl)amino-2-(hydroxymethyl)-1,3-propanediol Bis(2-hydroxyethyl)amino-tris(hydroxymethyl)methane 2,2-Bis(hydroxymethyl)-2,2',2''-nitrilotriethanol
EC Number	:	230-237-7
CAS Number	:	6976-37-0
Molecular Formula	:	C <sub>8</sub> H <sub>19</sub> NO <sub>5</sub>
Molecular Weight	:	209.24 g/mol

**SECTION 4 – First Aid Measures****4.1 Description of Necessary First Aid Measures**

Eyes	:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Immediately call in ophthalmologist. Remove contact lenses.
Skin	:	Take off contaminated clothing immediately. Rinse contaminated area with plenty of water for at least 15 minutes.
Ingestion	:	Immediately drink plenty of water to dilute. DO NOT induce vomiting unless instructed to do so by a medical professional. Never give anything by mouth to an unconscious person.
Inhalation	:	Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician	:	Treat symptomatically and supportively.

**4.2 Most Important Symptoms/Effects, Acute and Delayed**

Refer to Section 2.2 for Precautionary Statements if any are applicable

**4.3 Indication of Immediate Medical Attention and Special Treatment**

No information available

**SECTION 5 - Firefighting Measures****5.1 Extinguishing Media**

Water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2 Specific Hazards Associated with this Chemical**

Carbon Oxides, Nitrogen Oxides (NO<sub>x</sub>)

Combustible

Development of hazardous combustion gases or vapors possible in the event of a fire.

**5.3 Special Equipment/Precautions for Firefighters**

May be combustible at high temperatures. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Explosion will appear as fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**5.4 Other Information**

Suppress (knock down) gases/vapors and/or mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6 - Accidental Release Measures

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Avoid dust formation. Avoid breathing vapors, mist or gas. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures and consult an expert. Use proper personal protective equipment as indicated in Section 8.

### 6.2 Environmental Precautions

Do not allow product to enter drains

### 6.3 Methods and Materials for Containment and Cleaning Up

Cover drains. Collect, bind and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions.

### 6.4 Other Information

For disposal instructions see section 13.

## SECTION 7 - Handling and Storage

### 7.1 Precautions for Safe Handling

For precautions see section 2.2

### 7.2 Conditions for Storage Including any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Other Information

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8 - Exposure Controls, Personal Protection

### 8.1 Control Parameters

Chemical does not contain any substances with occupational exposure limits

### 8.2 Engineering Controls

Change contaminated clothing. Wash hands after working with substance.

### 8.3 Personal Protective Equipment

#### Eyes

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. Tightly fitting safety goggles.

#### Skin

Wear appropriate protective gloves to prevent skin exposure. Wear impervious gloves: Nitrile rubber with layer thickness 0.07mm. This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Viton®

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

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**Clothing**

Wear appropriate protective clothing to prevent skin exposure

**Respirators**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environment exposure**

Do not let product enter drains

**SECTION 9 - Physical and Chemical Properties**

Physical State	: Solid
Appearance	: White Crystalline
Odor	: Not available
pH	: 8.8-9.8
pK <sub>a</sub>	: 6.3 – 6.7 at 25°C
Vapor Density	: Not available
Viscosity	: Not available
Melting Range	: 100 - 105 °C
Boiling Point	: Not available
Decomposition Temperature	: 250°C
Specific Gravity/Density	: Not available
Solubility	: 579.9 g/L at 20 °C
Molecular Formula	: C <sub>8</sub> H <sub>19</sub> NO <sub>5</sub>
Molecular Weight	: 209.24 g/mol

**SECTION 10 - Stability and Reactivity**

**10.1 Chemical Stability**

Stable under standard ambient conditions (room temperature).

**10.2 Conditions to Avoid**

Not data available

**10.3 Incompatibilities with Other Materials**

Strong oxidizing agents

**10.4 Hazardous Decomposition Products**

Hazardous decomposition products formed under fire conditions. Carbon Oxides, Nitrogen Oxides (NO<sub>x</sub>)

In the event of a fire refer to section 5

**10.5 Hazardous Polymerization**

Not data available

**SECTION 11 - Toxicological Information**

**11.1 Toxicological Effects**

- LD50/LC50 Oral, rat : LD50 = > 2000 mg/kg
- LD50/LC50 Dermal, rat : No data available
- Carcinogenicity : CAS# 6976-37-0: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA
- Epidemiology : Reconstructed human epidermis (RhE) Result no irritation – 15 min
- Teratogenicity : No data available
- Reproductive Effects : None listed
- Neurotoxicity : No data available
- Mutagenicity : No data available
- Other Studies : No data available

**11.2 Additional Information**

RTECS# : Not available

Repeated dose toxicity - rat - Oral - No observed adverse effect level - 1,000 mg/kg  
 To the best of our knowledge the associated physical, chemical and toxicological properties of this chemical have not undergone thorough investigation, all known information is contained in this SDS.

**SECTION 12 - Ecological Information**

**12.1 Ecotoxicity**

Toxicity to Daphnia and Other Aquatic Invertebrates	
LC50 – Danio rerio (zebra fish)	> 100 mg/l – 96h
EC50 – Daphnia magna (Water flea)	> 100 mg/l – 48h
ErC50 - Pseudokirchneriella subcapitata (green algae)	> 100 mg/l – 72h
EC10 – activated sludge	>1,000 mg/l – 3h

**12.2 Persistence and Degradability**

- Biodegradability Result : Aerobic – Exposure time 28d  
Result: 11.89% - Not readily biodegradable
- Method : OECD Test Guideline 301B

**12.3 Bioaccumulative Potential**

No information available

**12.4 Mobility in Soil**

No information available

**12.5 Results of PBT and vPvB Assessment**

No information available as chemical safety assessment not required/not conducted

**12.6 Other Adverse Effects**

No information available

**SECTION 13 - Disposal Considerations**

Waste material must be disposed of in accordance with the national and local No mixing with other waste. Handle uncleaned containers like the product. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

## SECTION 14 - Transport Information

Regulations	US DOT	IATA	IMDG	Further information
Shipping Name	Not Dangerous Goods	Not Dangerous Goods	Not Dangerous Goods	Not classified as dangerous in the meaning of transport regulations
Hazard Class				
UN Number				
Packing Group				

## SECTION 15 - Regulatory Information

### 15.1 EHS Chemical Specific Regulations

#### SARA:

- Section 302 : This material does not contain any components with a section 302 EHS TPQ
- Section 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

#### STATE SPECIFIC:

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

## SECTION 16 - Additional Information

### 16.1 Hazard Ratings

NFPA Rating	
Health hazard	0
Fire Hazard	0
Reactivity Hazard	0

HMIS Classification	
Health hazard	0
Flammability	0
Physical Hazards	0

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