



Health	2
Fire	0
Reactivity	0
Personal Protection	

## Material Safety Data Sheet

### Tris, Ultra-pure grade

#### 1: Chemical Product and Company Identification

**Product Name:** Tris, Ultra-pure grade

**Catalog Code:** 42020236-1, 42020236-2

**CAS#:** 77-86-1

**RTECS:** TY2900000

**TSCA:** TSCA 8(b) inventory : Tris (Hydroxymethyl) Aminomethane

**CI#:** Not available.

**Synonym:** 2-Amino-2-(hydroxymethyl)propane-1,3-diol; 2-Amino-2-(hydroxymethyl)-1,3-propanediol; 2-Amino-2-methylol-1,3-propanediol; Aminotrimethylolmethane; Aminotris(hydroxymethyl) methane; Methylamine, 1,1,1-tris(hydroxymethyl)-; Trimethylolaminomethane; Tris (buffering agent); Trisamine; Tris-amino; Trisaminol; Tris buffer; Tris-hydroxymethylaminomethane; Tris(hydroxymethyl)methanamine; Tris(hydroxymethyl)methylamine; Tromethamine; Tromethane; Tromethanmin

**Contact information:**

**bioWORLD**

4150 Tuller Rd

Suite 228, Dublin, OH 43017, USA

For information, call: 614-792-8680

Fax Number: 614-792-8685

Order Online: [www.bio-world.com](http://www.bio-world.com)

E-mail : [save@bio-world.com](mailto:save@bio-world.com)

**In case of a chemical emergency, contact local hospital.**

**For non-emergency assistance, call: 1-800-860-9729**

**Chemical Name:** Tris (Hydroxymethyl) Aminomethane

**Chemical Formula:** C<sub>4</sub>H<sub>11</sub>NO<sub>3</sub>

#### 2: Composition and Information on Ingredients

**Composition:**

Name	CAS#	% by Weight
Tris (Hydroxymethyl) Aminomethane	77-86-1	>99.8

**Toxicological Data on Ingredients:**

LD<sub>50</sub> (Oral, Rat): 5900 mg/kg

LD<sub>50</sub> (Intravenous, Rat): 1800 mg/kg

LD<sub>50</sub> (Intravenous, Mouse): 1210 mg/kg

#### 3: Hazards Identification

**Potential Acute Health Effects:** Irritating to eyes, respiratory system and skin.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

**4: First Aid Measures**

**Eye Contact:** In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

**Skin Contact:** In case of contact, immediately wash skin with soap and copious amounts of water.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**Serious Inhalation:** Not available.

**Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Serious Ingestion:** Not available.

**5: Fire and Explosion Data**

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Product of Combustion:** Carbon monoxide, Carbon dioxide, Nitrogen oxides.

**Fire Hazards in Presence of Various Substances:** Not available.

**Explosion Hazards in Presence of Various Substances:**  
Not available.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Dry chemical powder.

LARGE FIRE: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

**6: Accidental Release Measures**

**Small Spill:** Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site

after material pickup is complete.

**Large Spill:** Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

### 7: Handling and Storage

**Precautions:** Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage:** Keep tightly closed.

### 8: Exposure Controls/Personal Protection

**Engineering Controls:** Safety shower and eye bath. Mechanical exhaust required.

**Personal Protection:** Respiratory : Government approved respirator.

Hand: Chemical resistant gloves.

Eye: Safety glasses.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Boots. Dust respirator. Gloves.

**Exposure Limits:** Not available.

### 9: Physical and Chemical Properties

**Physical State and Appearance:** Solid (Crystalline powder).

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** 121.14 g/mole

**Color:** White.

**pH(1% soln/water):** 10.5 - 12.0

**Boiling Point:** 219.0 - 220.0 °C

**Melting Point:** 171.2 - 172.3 °C

**Critical Temperature:** Not available.

**Specific Gravity:** Not available.

**Vapour Pressure:** Not available.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Not available.

**Solubility:** Soluble in water.

### 10: Stability and Reactivity Data

**Stability:** Stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Moisture.

**Incompatibility with various substances:** Strong oxidizing agents.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

### 11: Toxicological Information

**Routes of Entry:** Skin contact. Eye contact. Ingestion. Inhalation.

**Toxicity to Animals:**

LD<sub>50</sub> (Oral, Rat): 5900 mg/kg

LD<sub>50</sub> (Intravenous, Rat): 1800 mg/kg

LD<sub>50</sub> (Intravenous, Mouse): 1210 mg/kg

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:** Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

### 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Product of Biodegradation:** Not available.

**Toxicity of the Products of Biodegradation:** Not available.

**Special Remarks on the Products of Biodegradation:** Not available.

### 13: Disposal Considerations

**Waste Disposal:** Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

#### 14: Transport Information

**DOT Classification:** Not a DOT controlled material.

**Identification:** Not available.

**Special Provisions for Transport:** Not available.

#### 15: Other Regulatory Information

**Federal and State Regulations:** TSCA 8(b) inventory : Tris (Hydroxymethyl) Aminomethane

**Other Regulations:** EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xi

Indication of Danger: Irritant.

R: 36/37/38

Risk Statements: Irritating to eyes, respiratory system and skin.

S: 26-36

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

**Other Classifications:**

**WHMIS(Canada):** Not available.

**DSCL(EEC):** Not available.

**HMIS(U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:**

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:** Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety goggles.

#### 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 15/12/2006 1:03:22 PM

**Last Updated:** 07/01/2009 11:42:30 AM

#### **Disclaimer**

This product is offered by bioWORLD for research, laboratory or further manufacturing use. Not for human use or consumption.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Bio-World.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Bio-World.com has been advised of the possibility of such damages.