



|                     |   |
|---------------------|---|
| Health              | 2 |
| Fire                | 1 |
| Reactivity          | 0 |
| Personal Protection | E |

## Material Safety Data Sheet

### Tromethamine MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Tromethamine

**Catalog Codes:** SLT3844

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

**RTECS:** TY2900000

**TSCA:** TSCA 8(b) inventory: Tromethamine

**CI#:** Not available.

**Synonym:** Spectris, Tris Buffer, Tris-amino, Tromethane, Trometamol, Trisamine, Trisaminol, Trisamat, Tris(hydroxymethyl)aminomethane; Tris(hydroxymethyl)methylamine; 2-Amino-2-(hydroxymethyl)-1,3-propanediol; 2-Amino-2-(hydroxymethyl)propane-1,3-diol; 2-Amino-2-methylol-1,3-propanediol; Aminotrimethylolmethane; Aminotris(hydroxymethyl)methane; Methyl, 1,1,1-tris(hydroxymethyl)-; Tris (hydroxymethyl)methanamine

**Chemical Name:** 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-

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

#### Contact Information:

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

#### Section 2: Composition and Information on Ingredients

##### Composition:

| Name                        | CAS #   | % by Weight |
|-----------------------------|---------|-------------|
| Tromethamine, Biotech Grade | 77-86-1 | 100         |

**Toxicological Data on Ingredients:** Tromethamine, Biotech Grade: ORAL (LD50): Acute: 5900 mg/kg [Rat].

#### Section 3: Hazards Identification

**Potential Acute Health Effects:** Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

##### Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, skin. Repeated or prolonged exposure to the substance can produce target organs damage.

## Section 4: First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

### Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

### 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. Get medical attention.

**Serious Inhalation:** Not available.

### Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

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

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

**Flash Points:** CLOSED CUP: Higher than 93.3°C (200°F).

**Flammable Limits:** Not available.

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO, NO<sub>2</sub>...).

### Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

### Explosion Hazards in Presence of Various Substances:

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

### Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** As with most organic solids, fire is possible at elevated temperatures

### Special Remarks on Explosion Hazards:

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

## Section 6: Accidental Release Measures

### Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

### 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.

## Section 7: Handling and Storage

### Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, metals, acids, alkalis.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (crystalline powder.)

**Odor:** Characteristic. (Slight.)

**Taste:** Faint; sweet; soapy

**Molecular Weight:** 121.14 g/mole

**Color:** White.

**pH (1% soln/water):** Not available.

**Boiling Point:** 219.5°C (427.1°F)

**Melting Point:** 171°C (339.8°F)

**Critical Temperature:** Not available.

**Specific Gravity:** Not available.

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

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

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

**Dispersion Properties:** See solubility in water, methanol, acetone.

**Solubility:**

Easily soluble in cold water, hot water. Partially soluble in methanol, acetone. Solubility in water: 550 mg/ml. Solubility in Ethylene Glycol: 79.1 mg/ml. Solubility in Methanol: 26 mg/ml. Solubility in Acetone: 14.6 mg/ml. Solubility in Ethyl Acetate: 0.5 mg/ml. Solubility in Olive oil: 0.4 mg/ml. Solubility in Cyclohexane: 0.1 mg/ml. Solubility in Chloroform: 0.05 mg/ml. Solubility in Carbon Tetrachloride: less than 0.05 mg/ml

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Heat, dust generation, and incompatible materials.

**Incompatibility with various substances:** Reactive with oxidizing agents, metals, acids, alkalis.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**

Incompatible with metals such as copper, brass, and aluminum. Incompatible with aldehydes. Hygroscopic; keep container tightly closed.

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

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 5900 mg/kg [Rat].

**Chronic Effects on Humans:** May cause damage to the following organs: kidneys, liver, skin.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**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:**

Acute Potential Health Effects: Skin: Causes skin irritation Eyes: Causes eye irritation. Inhalation: Mild alkali. Causes respiratory tract irritaiton. Symptoms may include coughing, shortness of breath.. Ingestion: Causes irritation of the gastrointestinal tract and reddening of the mucous membranes of the, mouth, esophagous. Symptoms may include nausea, vomiting, diarrhea. May affect behavior/central nervous system(somnolence, muscle weakness, coma), liver (liver damage), kidneys (kidney damage). Chronic Potential Health Effects: Skin: Prolonged or repeated contact with skin may cause dermatitis.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

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

## Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14: Transport Information**

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

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

**Section 15: Other Regulatory Information**

**Federal and State Regulations:** TSCA 8(b) inventory: Tromethamine

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):** CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC):**

R36/38- Irritating to eyes and skin. S2- Keep out of the reach of children. S46- If swallowed, seek medical advice immediately and show this container or label.

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

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** E

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

**Health:** 1

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/10/2005 12:10 AM

**Last Updated:** 11/01/2010 12:00 PM

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