

EMS CATALOG NO: 11700  
EMS PRODUCT: Tris, Crystal  
DATE: 06/15/2006  
PAGE NUMBER: One of 4

#### MATERIAL SAFETY DATA SHEET

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Electron Microscopy Sciences assumes no responsibility for personal injury or property damage to vendees, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material.

#### ELECTRON MICROSCOPY SCIENCES

321 MORRIS ROAD

P.O. BOX 251

FORT WASHINGTON, PA 19034

(215) 646-1566

24 HOUR EMERGENCY PHONE NUMBER

CHEMTREC: (800) 424-9300

---

#### FOR PRODUCT AND SALES INFORMATION

---

CONTACT ELECTRON MICROSCOPY SCIENCES OFFICE ABOVE.

---

#### PRODUCT IDENTIFICATION

---

PRODUCT NAME: Tris Free Base, Ultra Pure

MOLECULAR FORM: C4H11N1O3

CAS #: 77-86-1

#### SYNONYMS:

Addex-Tham\*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)-\*Pehanorm\*Talatrol\*Tham\*Tham-E\*Tham Set\*Trimethylolaminomethane\*Trisamine\*Tris-Amino\*Trisaminol\*Tris Buffer\*Tris-Hydroxymethyl-Aminomethan (GER) 8Trometamol\*Trometamole\*Tris Hydroxymethylaminomethane\*Tris(Hydroxymethyl)Methanamine\*

Tris (Hydroxymethyl)Methylamine\*Trispuffer\*Tris-Steril\*  
Tromethamine\*Tromethane\*Tromethanmin\*Tutofusin Tris

OSHA REGULATED COMPONENTS: No Hazardous Components

---

TOXICITY DATA

---

RTECS NO. <Y2900000

RTECS NAME: 1,3-Propanediol, 2-Amino-2-(Hydroxymethyl)-

TOXICITY DATA:

|                          |                   |
|--------------------------|-------------------|
| Orl-Rat LD50: 5900 mg/kg | BCFAAI 110,653,71 |
| Ivn-Mus LD50: 1210 mg/kg | ABMGAJ 17,217,66  |

REGULATIONS, STANDARDS, AND REVIEWS:

NOHS 1974: HZD 81165; NIS 4; TNF 850;.NOS 6: TNE 7274  
NOES 1983: HZD 81165000; TNG 9; NIS 2296; NOS 22; TNE 40897;  
TFE 30773

TARGET ORGAN DATA: No data available.

---

HEALTH HAZARDS DATA

---

HEALTH HAZARDS ACUTE/CHRONIC:

Harmful if ingested, inhaled, or absorbed through the skin.  
Causes eye and skin irritation.  
Material is irritating to mucous membranes and upper respiratory tract.

SIGNS AND SYMPTOMS OF EXPOSURE: No data available.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No data available.

EMERGENCY / FIRST AID PROCEDURES:

In case of contact, wash skin with soap and copious amounts of water for at least 15 minutes.

In case of contact, flush eyes with copious amounts of water for at least 15 minutes.

If swallowed, wash out mouth with water provided person is conscious.

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

In all cases, call a physician.

---

FIRE AND EXPLOSION HAZARD DATA

---

EXTINGUISHING MEDIA:

Water spray, carbon dioxide, dry chemical powder, alcohol or polymer foam

SPECIAL FIRE FIGHTING PROCEDURES:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eye.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Emits toxic fumes under fire conditions.

---

PHYSICAL / CHEMICAL CHARACTERISTICS

---

BOILING POINT: 219-220oC  
MELTING POINT: 1678-169oC  
APPEARANCE/ODOR: White crystalline powder

---

REACTIVITY DATA

---

CONDITIONS TO AVOID: No data available.

INCOMPATIBILITY: Bases, oxidizing agents

---

PROCEDURES FOR LEAKS AND/OR SPILLS

---

STEPS TO BE TAKEN IN CASE OF A SPILL:

Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.  
Avoid raising dust.  
Sweep up, place in a bag and hold for waste disposal.  
Ventilate area and wash spill site after material pickup is complete.

**PROCEDURE FOR WASTE DISPOSAL:**

(Observe all Federal, State, and local regulations)  
The material should be ignited in the presence of sodium carbonate and slaked lime (calcium hydroxide). The substance should be mixed with vermiculite and the dry caustics wrapped in paper and burned in a chemical incinerator equipped with an after burner and scrubber.

**STORAGE AND HANDLING PRECAUTIONS:**

Do not breathe dust.  
Avoid contact with eyes, skin and clothing.  
Avoid prolonged or repeated exposure.  
Wash thoroughly after handling.  
Irritant.  
Keep tightly closed.

**PRIMARY SHIPPING CONDITION:** Ambient temperature.

**RECOMMENDED STORAGE CONDITION:** Room temperature 15 to 30oC.

**LABEL PRECAUTIONARY STATEMENTS:** No data available.

---

**EMPLOYEE PERSONAL PROTECTION**

---

**RESPIRATORY PROTECTION:** NIOSH/MSHA-Approved respirator  
**VENTILATION:** Mechanical exhaust required  
**PROTECTIVE GLOVES:** Chemical-resistant gloves  
**EYE PROTECTION:** Chemical Safety goggles  
**OTHER PROTECTIVE EQUIPMENT:** Safety shower and eye bath

THE INFORMATION IS THIS MATERIAL SAFETY DATA SHEET MEET THE REQUIREMENTS OF THE UNITED STATES OSHA HAZARD COMMUNICATION STANDARD (29 cfr 1910.1200).