



**SIGMA-ALDRICH**

## Material Safety Data Sheet

Date Printed: 01/15/2004  
Date Updated: 09/07/2002  
Version 1.60

### Section 1 - Product and Company Information

<b>Product Name</b>	TRIZMA BASE, BIOTECHNOLOGY PERFORMANCE CERTIFIED		
<b>Product Number</b>	T6066		
<b>Brand</b>	Sigma Chemical		
<b>Company</b>	Sigma-Aldrich		
<b>Street Address</b>	3050 Spruce Street		
<b>City, State, Zip, Country</b>	SAINT LOUIS, MO 63103 US		
<b>Technical Phone:</b>	314 771 5765	<b>Emergency Phone:</b>	414 273 3850 Ext. 5996
<b>Fax:</b>	800 325 5052		

### Section 2 - Composition/Information on Ingredient

<b>Substance Name</b>	<b>CAS #</b>	<b>SARA 313</b>
TRIS (HYDROXYMETHYL) AMINOMETHANE FREE BASE	77-86-1	No

<b>Formula</b>	C4H11NO3
<b>Synonyms</b>	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-E, THAM set, Trimethylolaminomethane, Tris (buffering agent), Trisamine, Tris-amino, Trisaminol, Tris buffer, Tris-hydroxymethyl-aminomethan (German), Tris-hydroxymethylaminomethane, Tris(hydroxymethyl)methanamine, Tris(hydroxymethyl)methylamine, Trispuffer, Tris-steril, Trometamol, Trometamole, Tromethamine, Tromethane, Tromethanmin, Tutofusin tris

### Section 3 - Hazards Identification

#### Emergency Overview

Irritant.  
Irritating to eyes, respiratory system and skin.

<b>HMIS Rating</b>		
Health: 2	Flammability: 0	Reactivity: 0

<b>NFPA Rating</b>		
Health: 2	Flammability: 0	Reactivity: 0

For additional information on toxicity, please refer to Section 11.

### Section 4 - First Aid Measures

#### Oral Exposure

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

#### Inhalation Exposure

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

#### Dermal Exposure

In case of contact, immediately wash skin with soap and copious amounts of water.

#### Eye Exposure

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

### Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

#### Extinguishing Media

##### Suitable

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

#### Firefighting

##### Protective Equipment

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

##### Specific Hazard(s)

Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

#### Procedure to be Followed in Case of Leak or Spill

Sweep together the wetted material carefully and fill into marked, sealed containers.

#### Procedure(s) of Personal Precaution(s)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

#### Methods for Cleaning Up

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.

### Section 7 - Handling and Storage

#### Handling

##### User Exposure

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

#### Storage

##### Suitable

Keep tightly closed. Store in a cool dry place.

#### Special Requirements

Hygroscopic.

### Section 8 - Exposure Controls / PPE

#### Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

#### Personal Protective Equipment

##### Respiratory

Government approved respirator.

##### Hand

Compatible chemical-resistant gloves.

##### Eye

Chemical safety goggles.

**General Hygiene Measures**  
Wash thoroughly after handling.

## Section 9 - Physical/Chemical Properties

Appearance	Color	Form
Physical State Solid	Colorless	Fine crystals

Molecular Weight: 121.14 AMU

Property	Value	At Temperature or Pressure
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pH	10.5 - 12.0	
BP/BP Range	219 - 220 °C	10 mmHg
MP/MP Range	171.2 - 172.3 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	0.8 kg/l	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point °F	N/A	
Flash Point °C	N/A	
Explosion Limits	N/A	

Flammability N/A  
Autoignition Temp N/A

Solubility  
Solubility in Water: 4 M in H<sub>2</sub>O, 20°C  
Solvent: complete, colorless

N/A = not available

## Section 10 - Stability and Reactivity

**Stability**  
Stable  
Stable.  
**Conditions to Avoid**  
Protect from moisture.  
**Materials to Avoid**  
Strong oxidizing agents.

**Hazardous Decomposition Products**  
Hazardous Decomposition Products  
Carbon monoxide, Carbon dioxide, Nitrogen oxides.

**Stabilizers Present**  
Stabilized with copper.

**Hazardous Polymerization**  
Hazardous Polymerization  
Will not occur.

## Section 11 - Toxicological Information

**Route of Exposure**  
**Skin Contact**  
Causes skin irritation.  
**Skin Absorption**  
May be harmful if absorbed through the skin.  
**Eye Contact**  
Causes eye irritation.  
**Inhalation**  
Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
**Ingestion**  
May be harmful if swallowed.

**Signs and Symptoms of Exposure**  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number:** TY2900000

### Toxicity Data

Oral - Rat: 5,900 mg/kg (LD50)  
Intravenous - Rat: 1800 MG/KG (LD50)  
Intravenous - Mouse: 1210 MG/KG (LD50)

## Section 12 - Ecological Information

No data available.

## Section 13 - Disposal Considerations

**Appropriate Method of Disposal of Substance or Preparation**  
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.

## Section 14 - Transport Information

**DOT**  
**Proper Shipping Name:** None  
**Non-Hazardous for Transport:** This substance is considered to be non-hazardous for transport.  
**IATA**  
**Non-Hazardous for Air Transport:** Non-hazardous for air transport.

## Section 15 - Regulatory Information

**EU Additional Classification**  
**Symbol of Danger:** Xi  
**Indication of Danger**  
Irritant.  
**Risk Statements** R: 36/37/38  
Irritating to eyes, respiratory system and skin.

**Safety Statements** S: 26 36

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

**US Classification and Label Text**

**Indication of Danger**

Irritant.

**Risk Statements**

Irritating to eyes, respiratory system and skin.

**Safety Statements**

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

**United States Regulatory Information**

SARA Listed: No

TSCA Inventory Item: Yes

**Canada Regulatory Information**

**WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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**Section 16 - Other Information**

**Disclaimer**

For R&D use only. Not for drug, household or other uses.

**Warranty**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.