



PURITAN PRODUCTS

Effective Date: 08/01/14

Replaces Revision: Not Applicable

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: TRIS HYDROCHLORIDE

Synonyms: 2-Amino-2-(Hydroxymethyl)-1,3-Propanediol Hydrochloride;
Tris (Hydroxymethyl) Aminomethane Hydrochloride

Chemical Formula: C₄H₁₁NO₃ · HCl

Recommended Use of the Chemical and Restrictions On Use: Laboratory Chemicals

Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture: Not classified

Risk Phrases: None

Label Elements:

Trade Name: TRIS HYDROCHLORIDE

Signal Word: None

Pictogram: None

Hazard Statements: None

Precautionary Statements: None

3. Composition / Information on Ingredients

CAS Number: 1185-53-1

EC Number: 214-684-5

Molecular Weight: 157.60 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Tris Hydrochloride	1185-53-1	214-684-5	> 99%	Yes	Substance

4. First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Consult a physician.

Ingestion: Consult a physician or POISON CONTROL center. DO NOT INDUCE VOMITING unless directed by a physician! Rinse mouth with water. Never give anything by mouth to an unconscious person.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Call a physician if irritation develops or persists.

Eye Contact: Remove contacts, if present and easy to do so. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Consult a physician.

5. Fire-fighting Measures

Flammable Properties: Fire is possible at elevated temperatures or contact with an ignition source. Slight fire hazard when exposed to heat or flame.

Fire Extinguishing Media: Use water spray, Alcohol-resistant foam, dry chemical or Carbon Dioxide.

Special Information: 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.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate personal protective equipment as specified in Section 8.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Ventilate area of leak or spill. Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Do not let product enter drains.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues (dust, solids.) Observe all warnings and precautions listed for the product.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits: None established.

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. For emergencies or instances where the exposure levels are not known, use a full face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: White crystalline solid

Odor: Odorless

Odor Threshold: Not determined

pH: 3.5-5.5 (0.5M sol.)

Melting Point: 150 - 152C (302 - 306F)

Boiling Point / Boiling Range: Not applicable

Flash Point: No data available

Evaporation Rate (BuAc=1): No data available

Flammability: No data available

Upper / Lower Flammability or Explosive Limits: No data available

Vapor Pressure (mm Hg): Negligible

Vapor Density (Air=1): No data available

Relative Density: 157.60 g/mol

Solubility: Soluble in water

Partition Coefficient: n-octanol / water: No data available

Auto-ignition Temperature: No data available

Decomposition Temperature: 150 - 152C (302 - 306F)

Viscosity: No data available

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary use and storage conditions. May decompose if heated.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

Incompatible Materials: Oxidizing agents, Copper, Brass, and Aluminum.

Hazardous Decomposition Products: Hydrogen Chloride, Chlorine, Nitrogen Oxides, Carbon Monoxide, Carbon Dioxide, Ammonia and / or derivatives, Nitrogen.

11. Toxicological Information

Emergency Overview: WARNING! MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. Toxicological properties have not been thoroughly investigated.

Potential Health Effects:

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. The toxicological properties of this substance have not been fully investigated.

Skin Contact: May cause irritation.

Eye Contact: May cause irritation.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Tris Hydrochloride (1185-53-1)	No	No	None

Acute Toxicity: No data available

12. Ecological Information

Ecotoxicity:

EC50 Daphnia: > 100 mg/l - 48 h

Toxicity to algae EC50 - other microorganisms: > 1,000 mg/l - 3 h

Persistence and Degradability: Expected to biodegrade.

Bioaccumulative Potential: No information found.

Mobility in Soil: No information found.

Other adverse effects: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Not regulated

Maritime Transport IMDG/GGVSea

Not regulated

Air Transport ICAO-TI and IATA-DGR

Not regulated

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Tris Hydrochloride (1185-53-1)	Yes	Yes	No	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Tris Hydrochloride (1185-53-1)	No	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
Tris Hydrochloride (1185-53-1)	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
Tris Hydrochloride (1185-53-1)	No	No	No

Chemical Weapons Convention: No	TSCA 12(b): No	CDTA: No
SARA 311/312: Acute: Yes	Chronic: No	Fire: No
Reactivity: No	Pure / Solid	

Australian Hazchem Code: Not classified

Poison Schedule: None allocated

16. Other Information

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