

MATERIAL SAFETY DATA SHEET

Product Name: Tris buffer

CAS No.:77-86-1

Version: 0

1. Identification

Product Code : 90265
Company Name : Advent Chembio Private Limited
Address : W-288, MIDC, TTC INDUSTRIAL AREA, THANE-BELAPUR
ROAD, RABALE, NAVI MUMBAI - 400 701.
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WEBSITE : www.adventchembio.com
Company Phone Number : 022-27690837

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
TRIS BUFFER	77-86-1	99- 100%

3. Hazards Identification**Hazard classification****Health hazards**

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2

Specific target organ toxicity - single exposure : Category 3

Labels elements**Hazard symbol****Signal word** : Warning**Hazard statement** : Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.**Precautionary statement****Prevention** : Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.

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- Response** : IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Specific treatment (see this label). IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Storage** : Store locked up. Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : None.

4. First Aid Measures

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
- Inhalation** : Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration.
- Skin contact** : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy contaminated clothing and shoes.
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.
- Most important symptoms/effects, acute and delayed** : Irritating to eyes, respiratory system and skin.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

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5. Fire fighting measures

- General fire hazards** : In case of fire and/or explosion do not breathe fumes.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Water spray, dry powder or carbon dioxide.
- Unsuitable extinguishing media** : None known
- Specific hazards arising from the chemical** : Dust may form explosive mixture with air. During fire, gases hazardous to health may be formed.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Use water spray to keep fire-exposed containers cool. Move containers from fire area if you can do so without risk.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures** : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Use personal protective equipment. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Sweep up and place in a clearly labeled container for chemical waste. Avoid dust formation. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spills for later disposal.
- Notification Procedures** : Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
- Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

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7. Handling and Storage

- Precautions for safe handling** : Use personal protective equipment as required. Do not taste or swallow. Avoid conditions which create dust. Dust clouds may be explosive under certain conditions. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid inhalation of dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Keep container tightly closed. Keep in a cool, well-ventilated place. Store in a dry place.

8. Exposure Controls Personal Protection**Control parameters**

Occupational exposure limits : None of the components have assigned exposure limits

Appropriate engineering controls : No data available.**Individual protection measures, such as personal protective equipment**

- General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
- Eye/face protection** : Wear safety glasses with side shields (or goggles).
- Hand protection** : Chemical resistant gloves .
- Other** : Wear suitable protective clothing.
- Respiratory protection** : In case of inadequate ventilation use suitable respirator.
- Hygiene measures** : Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using the product. Wash contaminated clothing before reuse.

9. Physical and Chemical Properties

- Appearance** : Colorless Crystals Solid
- Odor** : Slight characteristic odor.
- pH** : 10.4 (0.1 molar aqueous solution)
- Melting point/freezing point** : 171 °C
- Initial boiling point and boiling range** : 219 °C (1.33 kPa)
- Flash Point** : No data available.
- Vapor pressure** : No data available.
- Vapor density** : No data available.

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Relative density : No data available.
Solubility in water : Soluble
Solubility (other) : No data available.
Formula : C₄H₁₁NO₃
Molecular Weight : 121.14 g/mol

10. Stability and Reactivity

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : Material is stable under normal conditions.
Possibility of hazardous reactions : Hazardous polymerization does not occur.
Conditions to avoid : Heat, sparks, flames. Contact with incompatible materials.
Incompatible materials : Strong oxidizing agents. Aluminum. Copper.
Hazardous decomposition products : Thermal decomposition may produce oxides of carbon and nitrogen.

11. Toxicological Information**Information on likely routes of exposure**

Ingestion : Irritating. May cause nausea, stomach pain and vomiting.
Inhalation : Dust may irritate respiratory system.
Skin contact : Causes skin irritation.
Eye contact : Causes serious eye irritation.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product : LD 50 (Rat): 5,900 mg/kg
Dermal Product : No data available.
Inhalation Product : No data available.
Repeated dose toxicity Product : No data available.
Skin corrosion/irritation Product : Causes skin irritation.
Serious eye damage/eye irritation Product : Causes serious eye irritation.
Respiratory or skin sensitization Product : Not a skin sensitizer.
Carcinogenicity Product : This substance has no evidence of carcinogenic properties.
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE : No carcinogenic components identified.
US. National Toxicology Program : No carcinogenic components identified.

MATERIAL SAFETY DATA SHEET**Product Name:** Tris buffer**CAS No.:**77-86-1**Version:** 0**(NTP) Report on Carcinogens****DIOXANE****US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050** : No carcinogenic components identified.**Germ cell mutagenicity****In vitro Product** : No mutagenic components identified**In vivo Product** : No mutagenic components identified**Reproductive toxicity Product** : No components toxic to reproduction**Specific target organ toxicity - single exposure Product** : Respiratory tract irritation.**Specific target organ toxicity - repeated exposure Product** : None known**Aspiration hazard Product** : Not classified**Other effects** : No data available.**12. Ecological Information****Ecotoxicity****Acute hazards to the aquatic environment :****Fish Product** : No data available.**Aquatic invertebrates Product** : No data available.**Chronic hazards to the aquatic environment :****Fish Product** : No data available.**Aquatic invertebrates Product** : No data available.**Toxicity to Aquatic Plants Product:** : No data available.**Persistence and degradability****Biodegradation Product** : The product is readily biodegradable .**BOD/COD ratio Product** : No data available.**Bioaccumulative potential****Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.**Partition coefficient n-octanol / water (log Kow) Product** : No data available.**Mobility in soil** : The product is water soluble and may spread in water systems.**Other adverse effects** : The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

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13. Disposal consideration

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT			Not Regulated		
IMDG			Not Regulated		
IATA			Not Regulated		

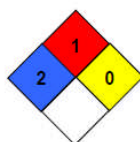
15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
 No Data Available.

16. Other Information

NFPA Hazard ID



- Flammability
- Health
- Reactivity
- Special hazard.

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Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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