MATERIAL SAFETY DATA SHEET

Tris Buffer (Tris-HCl)

1. Product and Company Information

Product Name: Tris Buffer (Tris-HCL)

Product Number A12-9198, A12-9199, A12-9200

Manufacturer: Medicago AB
Danmark Berga
755 98 Uppsala
Sweden

Phone No tel.: +46 (0) 18 56 11 80

Fax fax: +46 (0) 18 56 11 88

Emergency Phone: 112 (Sweden)

2. Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Not hazardous according to Directive 67/548/EEC.

Irritatinfg to eyes, respiratory system and skin. Causes burns.

3. Composition/Information on Ingredients

Ingredient name:	Percent	CAS no.:	EC no.:	Annex I Index Number
WATER	97.72	None	None	None
TRIS (HYDROXYMETHYL) AMINOMETHANE FREE BASE Symbols: Xi R-Phrases: 36/37/38 Irritating to eyes, respiratory system and skin.	1.21	None	None	None
HYDROCHLORIC ACID >=25% Symbols: C R-Phrases: 34-37 Causes burns. Irritating to respiratory system	1.07	None	None	None

4. First-Aid Measures

AFTER INHALATION
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

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

AFTER EYE CONTACT
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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

5. Fire-Fighting Measures

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

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SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions.

6. Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Sweep together the wetted material carefully and fill into marked, sealed containers.

METHODS FOR CLEANING UP
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7. Handling and Storage

HANDLING
Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of Storage: Keep tightly closed.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Hand Protection:
Protective gloves. Eye Protection:
Chemical safety goggles.

9. Physical and Chemical Properties

Appearance	Physical state: Powder

Property	Value	At Temperature or Pressure
pH	7.4 – 8.3	
Molecular Weight	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	1 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	

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Miscellaneous	N/A
Solubility	N/A

10. Stability and Reactivity

STABILITY Stable

MATERIALS TO AVOID: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11. Toxicological Information

SIGNS AND SYMPTOMS OF EXPOSURE

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

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

12. Ecological Information

No data available.

13. Disposal Considerations

SUBSTANCE DISPOSAL

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.

14. Transport Information

RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport

IATA

Non-hazardous for air transport

15. Regulatory Information

Not hazardous according to Directive 67/548/EEC.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1
Self-Classification

16. Other Information

Precautions and Disclaimer: For laboratory use only. Not for drug, household or other uses.

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