

SECTION 1: Product and Company Identification

Identification of the substance or mixture

Product Name: STM Buffer
 Catalog #: 10416, 10416-1

Company Identification

Cepharm Life Sciences Inc.
 11830 W Market Place, Suite K
 Fulton, MD 20759
 USA
 Toll Free: 1-800-257-1565
 Phone: 410-636-4954

24-hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Toll Free: 1-800-424-9300/ +1 703-527-3887 CCN 1010970

For Research Use Only. Not for use in diagnostic procedures.

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS-US classification
 Not classified

GHS Label elements, including precautionary statements

GHS-US labeling
 No labeling applicable

Other hazards which do not result in classification

No additional information available

Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition / Information on Ingredients

Mixtures

| Name | Common Name (Synonyms) | Product Identifier (CAS#) | % | GHS-US Classification |
|---------------------------------|---|---------------------------|----------|--|
| tris(hydroxymethyl)aminomethane | 1,1,1-tris(hydroxymethyl)methylamine / 1,3-propanediol, 2-amino-2-(hydroxymethyl)- / 2-amino-2-(hydroxymethyl)-1,3-propanediol / 2-amino-2-(hydroxymethyl)propane-1,3-diol / 2-amino-2-hydroxymethyl-1,3-propanediol / 2-amino-2-methylol-1,3-propanediol / addex-tham / aminotrimethylolmethane / aminotris(hydroxymethyl)methane / methanamine, 1,1,1-tris(hydroxymethyl)- / methylamine, | 77-86-1 | 0.05-0.5 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 |

| | | | |
|--|---|--|--|
| | 1,1,1-tris(hydroxymethyl)- / pehanorm / TALATROL / THAM / THAM set / THAM-E / trimethylaminomethane / TRIS / tris (buffering agent) / tris amine buffer / TRIS AMINO / TRIS buffer / TRIS(base) / tris(hydroxymethyl)methanamine / tris(hydroxymethyl)methylamine / trisamin / trisamine / trisaminol / tris-hydroxymethylaminomethan / tris-hydroxymethylaminomethane / TRISPUFFER / TRIS-STERIL / TRIZMA / trometamol / trometamole / tromethamine / TROMETHANE / tromethanmin / tutofusin TRIS | | |
|--|---|--|--|

Full text of hazard classes and H-statements: see section 16.

SECTION 4: First Aid Measures

Description of first aid measures

| | |
|--|--|
| First-aid measures after inhalation: | Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact: | Wash skin with plenty of water. |
| First-aid measures after eye contact: | Rinse eyes with water as a precaution. |
| First-aid measures after ingestion: | Call a poison center/doctor/physician if you feel unwell. |

Most important symptoms and effects, both acute and delayed

No additional information available

Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Firefighting Measures

Extinguishing media

Suitable extinguishing media

Water spray. Dry powder. Foam. Carbon dioxide.

Special hazards arising from the substance or mixture

The product is non-reactive under normal conditions of use, storage and transport.

Special protective equipment and precautions

Protection during firefighting Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures: Ventilate spillage area

For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Environmental precautions

Avoid release to the environment.

Methods and materials for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material.
Other information: Dispose of materials or solid residues at an authorized site.

Reference to other sections

For further information refer to section 13.

SECTION 7: Handling & Storage

Precautions for safe handling:

Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Conditions for safe storage, including and incompatibilities

Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure Controls / Personal Protection

Control parameters

tris(hydroxymethyl)aminomethane (77-86-1) Not applicable

Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

| | |
|---|-------------------|
| a) Appearance | Form: liquid |
| b) Odor | No data available |
| c) Odor Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | No data available |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | No data available |
| l) Vapour density | No data available |
| m) Relative density | No data available |
| n) Water solubility | No data available |
| o) Partition coefficient: n-octanol/water | No data available |
| p) Auto-ignition temperature | No data available |
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | No data available |

Other safety information

no data available

SECTION 10: Stability & Reactivity

Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

Conditions to avoid

None under recommended storage and handling conditions (see section 7).

Incompatible materials

No specific data

Hazardous decomposition products:

Hazardous decomposition products.

SECTION 11: Toxicological Information**Information on toxicological effects****Acute toxicity** Not classified

| tris(hydroxymethyl)aminomethane (77-86-1) | |
|--|------------------------|
| LD50 oral rat | 5900 mg/kg (Rat) |
| ATE US (oral) | 5900 mg/kg body weight |

| | |
|---|----------------|
| Skin corrosion/irritation: | Not classified |
| Serious eye damage/irritation: | Not classified |
| Respiratory or skin sensitization: | Not classified |
| Germ cell mutagenicity: | Not classified |
| Carcinogenicity: | Not classified |
| Reproductive toxicity: | Not classified |
| Specific target organ toxicity – single exposure: | Not classified |
| Specific target organ toxicity – repeated exposure: | Not classified |
| Aspiration hazard: | Not classified |

SECTION 12: Ecological Information**Toxicity**

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Persistence and degradability

| tris(hydroxymethyl)aminomethane (77-86-1) | |
|--|--|
| Persistence and degradability | Biodegradability in water: no data available |

Bioaccumulative potential

| tris(hydroxymethyl)aminomethane (77-86-1) | |
|--|----------------------------------|
| Log Pow | -1.56 |
| Bioaccumulative potential | Bioaccumulation: not applicable. |

Mobility in soil

No additional information available

Other adverse effects

| | |
|-------------------------------|-------------------------------------|
| Effect on the global warming: | No known effects from this product. |
| GWPMix comment: | No known effects from this product. |

SECTION 13: Disposal Considerations**Disposal methods**

Waste treatment methods: Waste treatment methods.

SECTION 14: Transport Information**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory Information

US Federal Regulations

tris(hydroxymethyl)aminomethane (77-86-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

International regulations

CANADA

tris(hydroxymethyl)aminomethane (77-86-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

US State regulations

No additional information available

SECTION 16: Other Information

Full text of H-phrases:

| | |
|------|----------------------------------|
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

Disclaimer:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not represent any guarantee of the properties of the product. Cepham Life Sciences Incorporated and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.