

## SECTION 1: Product and Company Identification

### Identification of the substance or mixture

**Product Name:** Tris Buffer, pH 9.0 [1M]  
**Catalog #:** 10430, 10430-1

### 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 Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS Label elements, including precautionary statements

Pictogram  
 Signal word



Warning

Hazard statement(s)  
 H315  
 H319  
 H335

Causes skin irritation.  
 Causes serious eye irritation.  
 May cause respiratory irritation.

Precautionary statement(s)  
 P261  
 P264  
 P271  
 P280  
 P302 + P352  
 P304 + P340

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
 Wash skin thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/ eye protection/ face protection.  
 IF ON SKIN: Wash with plenty of soap and water.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312  
 P321  
 P332 + P313  
 P337 + P313  
 P362  
 P403 + P233  
 P405

Call a POISON CENTER or doctor/ physician if you feel unwell.  
 Specific treatment (see supplemental first aid instructions on this label).  
 If skin irritation occurs: Get medical advice/ attention.  
 If eye irritation persists: Get medical advice/ attention.  
 Take off contaminated clothing and wash before reuse.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

### SECTION 3: Composition / Information on Ingredients

#### Mixtures

Formula: C<sub>4</sub>H<sub>11</sub>NO<sub>3</sub>+HCl

#### Hazardous components

Component	Classification	Concentration
<b>Tris (hydroxymethyl) aminomethane</b>		
CAS-No. 77-86-1 EC-No. 201-064-4 Registration Number: 01-2119957659-16-XXX		60-100%

For the full text of the H-statements mentioned in this section, see Section 16.

### SECTION 4: First Aid Measures

#### Description of first aid measures

##### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### Indication of any immediate medical attention and special treatment needed

No data available

### SECTION 5: Firefighting Measures

#### Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas

#### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Further information

no data available

### SECTION 6: Accidental Release Measures

#### Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.

#### Environmental precautions

Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**Reference to other sections**

For disposal see section 13.

**SECTION 7: Handling & Storage****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed.  
For precautions see section 2.2.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.  
Hygroscopic

**Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

**SECTION 8: Exposure Controls / Personal Protection****Control parameters****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Exposure controls****Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment****Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

Do not let product enter drains.

**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	9.0
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**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No data available

**Conditions to avoid**

No data available

**Incompatible materials**

Bases, Oxidizing agents

**Hazardous decomposition products**

Other decomposition products - no data available

In the event of fire: see section 5

**SECTION 11: Toxicological Information**

**Information on toxicological effects**

**Acute toxicity**

LD50 Oral - rat - > 3,000 mg/kg (Tris (hydroxymethyl) aminomethane)

Inhalation: no data available (Tris (hydroxymethyl) aminomethane)

LD50 Dermal - rat - > 5,000 mg/kg (Tris (hydroxymethyl) aminomethane)

(OECD Test Guideline 402)

no data available (Tris (hydroxymethyl) aminomethane)

**Skin corrosion/irritation**

Skin - rabbit

Result: No skin irritation

(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - rabbit (Tris (hydroxymethyl) aminomethane)

Result: No eye irritation

(OECD Test Guideline 405)

**Respiratory or skin sensitization**

Buehler Test - guinea pig (Tris (hydroxymethyl) aminomethane)

Does not cause skin sensitization.

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Result: Not mutagenic in Ames Test.

in vitro assay (Tris (hydroxymethyl) aminomethane)

Result: negative

In vitro tests did not show mutagenic effects

(Tris (hydroxymethyl) aminomethane)

Result: In vivo tests did not show any chromosomal changes.

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

no data available

**Additional Information**

Repeated dose toxicity - rat - Oral - No observed adverse effect level - 1,000 mg/kg (Tris (hydroxymethyl) aminomethane)

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Tris (hydroxymethyl) aminomethane)

## SECTION 12: Ecological Information

**Toxicity**

Toxicity to daphnia and other aquatic invertebrates

Toxicity to algae

EC50 - Daphnia - > 980 mg/l - 48 h (Tris (hydroxymethyl) aminomethane)

EC50 - Algae - 397 mg/l - 72 h (Tris (hydroxymethyl) aminomethane)

NOEC - Algae - 100 mg/l - 72 h (Tris (hydroxymethyl) aminomethane)

**Persistence and degradability**

Biodegradability

Result: - Readily biodegradable.  
(OECD Test Guideline 301F)

**Bioaccumulative potential**

No bioaccumulation is to be expected (log Pow <= 4).

**Mobility in soil**

no data available (Tris (hydroxymethyl) aminomethane)

**Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**Other adverse effects**

no data available

## SECTION 13: Disposal Considerations

**Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

## SECTION 14: Transport Information

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

## SECTION 15: Regulatory Information

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Acute Health Hazard

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	CAS-No.	1185-53-1	Revision Date
Tris (hydroxymethyl) aminomethane		77-86-1	

### New Jersey Right To Know Components

2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride	CAS-No.	1185-53-1	Revision Date
Tris (hydroxymethyl) aminomethane		77-86-1	

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## SECTION 16: Other Information

### Full text of H-Statements referred to under sections 2 and 3.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### HMIS Rating

Health hazard:	2
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

### NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

### 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.