Safety Data Sheet

REVISION: 02/28/2022

SECTION 1: Product and Company Identification

Identification of the substance or mixture

Catalog #: 10336, 10336-1
Product Name: Tris Base
CAS-No.: 77-86-1

Company Identification

Cepham 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
Not a hazardous substance or mixture.

GHS Label Elements, including Precautionary Statements
Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS
This substance is not considered to be persistent, bioaccumulating and toxic (PBT)

SECTION 3: Composition / Information on Ingredients

Substances

Synonyms:	2-Amino-2-(hydroxymethyl)-1,3-propanediol THAM Trometamol Tris base Tris(hydroxymethyl)aminomethane
Formula:	C4H11NO3
Molecular weight:	121.14 g/mol
CAS-No.:	77-86-1
EC-No.:	201-064-4
Registration number:	01-2119957659-16-XXXX

No components need to be disclosed according to the applicable regulations.

SECTION 4: First Aid Measures

Description of first aid measures

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

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 (NOx)

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
Avoid dust formation. Avoid breathing vapors, mist or gas.
For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
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
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. Store under inert gas.
Storage class (TRGS 510): Non Combustible Solids

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
General industrial hygiene practice.

Personal protective equipment

Eye/face protection
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.
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
No special environmental precautions required.

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

a) Appearance	Form: crystalline Color: colorless / white
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	10.5 - 12
e) Melting point/freezing point	169 °C (336 °F)
f) Initial boiling point and boiling range	288 °C (550 °F) at 1,013 hPa (760 mmHg) - Decomposes below the boiling point
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	678 g/l at 20 °C (68 °F)
o) Partition coefficient: n-octanol/water	log Pow: -2.31 at 20 °C (68 °F)
p) Auto-ignition temperature	The substance or mixture is not classified as self-heating.
q) Decomposition temperature	No data available
r) Viscosity	No applicable.
s) Explosive properties	Not explosive.
t) Oxidizing properties	The substance or mixture is not classified as oxidizing

Other safety information

Bulk density	800 kg/m3
Dissociation constant	8.22 at 25 °C (77 °F)

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
hygroscopic

Incompatible materials
Strong 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
Inhalation: No data available
LD50 Dermal - Rat - > 5,000 mg/kg
(OECD Test Guideline 402)
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization
Buehler Test - Guinea pig
Does not cause skin sensitization.
(OECD Test Guideline 406)

Germ cell mutagenicity
Result: Not mutagenic in Ames Test.
in vitro assay
Result: negative
In vitro tests did not show mutagenic effects
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
RTECS: TY2900000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological Information

Toxicity

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia (water flea) - > 980 mg/l - 48 h
Toxicity to algae	EC50 - Algae - 397 mg/l - 72 h NOEC - Algae - 100 mg/l - 72 h

Persistence and degradability

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

Bio-accumulative potential
No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil
No data available

Results of PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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.

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
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
No SARA Hazards

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

Pennsylvania Right To Know Components

Tris (hydroxymethyl) aminomethane	CAS-No. 77-86-1	Revision Date

New Jersey Right To Know Components

Tris (hydroxymethyl) aminomethane	CAS-No. 77-86-1	Revision Date

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

HMIS Rating

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

NFPA Rating

Health hazard:	0
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.