

SECTION 1: Product and Company Identification

Identification of the substance or mixture

Product Name: MES-SDS Running Buffer [20X]
Catalog #: 10378, 10378-1

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

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

- H302 - Acute Toxicity-Oral (Category 4)
- H312 - Acute Toxicity-Dermal (Category 4)
- H315 - Skin Corrosion/Irritation (Category 2)
- H319 - Serious Eye Damage/Eye Irritation (Category 2A)
- H332 - Acute Toxicity-Inhalation (Category 4)
- H335 - Specific Target Organ Toxicity, Single Exposure (Category 3)

GHS Label Elements, including Precautionary Statements



Pictogram	Warning
Signal Word	Warning
H302	Harmful if swallowed
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
Other Hazards	None found.

SECTION 3: Composition / Information on Ingredients

Mixture

Chemical Names/Description

Aqueous solution of tris base, sodium dodecyl sulfate and 2-(N-morpholino)ethanesulfonic acid

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Tris-Base	10-15	77-86-1	201-064-4	H315, H319, H335
MES	20-25	4432-31-9		H302, H312, H315, H320, H332, H335
SDS	2	151-21-3	205-788-1	H302, H315, H319, H335

SECTION 4: First Aid Measures

First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

Call a physician immediately if significant amounts have been swallowed. Give large amounts of water or milk to drink for dilution effect. Do not induce vomiting.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed

Inhalation

Tris-Base: Coughing, shortness of breath.
MES: No information found.
SDS: Coughing, shortness of breath. May cause allergic reaction in sensitive individuals.

Ingestion

Tris-Base: Symptoms may include nausea, vomiting, and diarrhea. Large oral doses may cause weakness, collapse, blood clotting, and coma. The estimated lethal dose of Tris Base is 50 grams dry solid.
MES: No information found.
SDS: Nausea and diarrhea.

Skin

Tris-Base: Redness, itching, and pain.
MES: No information found.
SDS: Causes dryness and a rash on continued exposure.

Eyes

Tris-Base: Redness, itching, and pain.
MES: No information found.
SDS: Causes redness and pain.

Indication of any immediate medical attention and special treatment needed

Unknown/not applicable

SECTION 5: Firefighting Measures

Suitable Extinguishing Media

Use media appropriate to the primary cause of fire.

Specific Hazards Arising from the Chemical Hazardous Combustion Products

Thermal decomposition products may include toxic oxides of nitrogen and carbon.

Hazardous Decomposition Products

Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous Polymerization

Will not occur under normal conditions of use (See Sections 10.4 & 10.5)

Advice for Firefighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Further information

No data available

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Wear appropriate protective equipment as specified in Section 8.

Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

Methods and Materials for Containment and Cleaning Up

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

References to Other Sections

For disposal information, see Section 13. For Protective clothing and equipment, see Section 8.

SECTION 7: Handling & Storage

Precautions for Safe Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatibles

Tris-Base:

No incompatibility data found.

MES:

No incompatibility data found.

SDS:

Strong oxidizers, acids.

Specific End Uses

Investigational research by professional users

SECTION 8: Exposure Controls / Personal Protection

Control parameters

Component: Tris-Base

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): none established

Component: MES

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): none established

Component: SDS

ACGIH Threshold Limit Value (TLV): None established

OSHA Permissible Exposure Limit (PEL): None established

Exposure Controls

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures low. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

Eye Protection

Use chemical safety goggles and/or a full-face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection

Wear protective gloves and clean body covering clothing

SECTION 9: Physical and Chemical Properties**Information on basic physical and chemical properties**

a) Appearance	Form: liquid Color: Colorless
b) Odor	None
c) Odor Threshold	N.A.
d) pH	8-9
e) Melting point/freezing point	0°C
f) Initial boiling point and boiling range	104.4°C
g) Flash point	N.A.
h) Evaporation rate	1
i) Flammability (solid, gas)	N.A.
j) Upper/lower flammability or explosive limits	N.A.
k) Vapour pressure	Water
l) Vapour density	No data available
m) Relative density	1.05
n) Water solubility	Miscible
o) Partition coefficient: n-octanol/water	Mixture
p) Auto-ignition temperature	N.A.
q) Decomposition temperature	N.A.
r) Viscosity	No data available
s) Explosive properties	N.A.
t) Oxidizing properties	N.A.

Other safety information

no data available

SECTION 10: Stability & Reactivity**Reactivity**

No data available

Chemical stability

Stable under ordinary conditions of use and storage.

Possibility of hazardous reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

Conditions to avoid

Heat, incompatibles.

Incompatible materials**Tris-Base:**

No incompatibility data found.

MES:

No incompatibility data found.

SDS:

Strong oxidizers, acids.

Hazardous Decomposition

Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

SECTION 11: Toxicological Information

Product LD50 Values

Oral Rat LD50 (mg/kg)

No data.

Dermal Rabbit LD50 (mg/kg)

No data.

Component Cancer List Status

NTP Carcinogen	Known	Anticipated	IARC Category
Tris-Base	No	No	None
MES	No	No	No
SDS	No	No	None

Potential Health Effects

Inhalation

Tris-Base

Causes irritation to the respiratory tract.

MES

No information found, but should be handled as a potential health hazard. May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, labored breathing, and chest pain.

SDS

Dust causes irritation to the respiratory tract.

Ingestion

Tris-Base

Causes irritation and reddening to the mucous membranes of the mouth, esophagus, and gastrointestinal tract.

MES

No information found, but should be handled as a potential health hazard. May cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

SDS

Large doses may cause gastrointestinal distress.

Skin

Tris-Base

Causes irritation to the skin.

MES

No information found, but compound should be handled as a potential health hazard. May cause irritation with redness and pain. May be absorbed through the skin with possible systematic effects.

SDS

Mildly irritating to skin. May cause allergic skin reactions.

Eyes

Tris-Base

Causes irritation to the eyes.

MES

No information found, but compound should be handled as a potential health hazard. May cause irritation, redness and pain.

SDS

Causes irritation to the eyes.

Carcinogenicity

Tris-Base

Not listed as a carcinogen by NTP or IARC.

MES

CAS# 4432-31-9: Not listed by ACGIH, IARC, NIOSH, NTP or OSHA.

SDS

Not listed as a known or suspected carcinogen by NTP or IARC.

Mutagenicity**Tris-Base**

No information found.

MES

No information available.

SDS

Has caused mutagenic effects on laboratory animals

Reproductive Toxicity**Tris-Base**

No information found.

MES

No information available.

SDS

Has caused mutagenic effects on laboratory animals.

Teratogenic Effects**Tris-Base**

No information found.

MES

No information available.

SDS

No information found.

Routes of Entry**Tris-Base**

Ingestion.

MES

Ingestion.

SDS

No information found.

Target Organ Statement**Tris-Base**

No information available.

MES

No information available.

SDS

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

SECTION 12: Ecological Information**Toxicity**

Component: Tris-Base	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50 460mg/l (Golden ide)	EC50: 59.8 mg/L (Daphnia)	EC50: 473mg/l @ 48 Hrs	CE50>1000mg/L (3hrs)
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data
Component: MES	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data
Component: SDS	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity	The 96 hr LC50 of	LC50 (Ceriodaphnia	EC50>120mg/L	IC50 (3 hrs): 480 mg/L

(ppm unless otherwise noted)	dodecyl sulfate to Fathead minnows was 29 mg/L	dubia, 48-hr): 5.55 mg/L		
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	EC50 (72hr, Cicer arietinum) 361 mg/L	No data

Persistence and Degradability

Tris-Base

Readily Biodegradable (>97% degradation at 28 days)

MES

No data

SDS

Readily biodegradable (>95% degradation in 28 days)

Bioaccumulative Potential

Tris-Base

No data

MES

No data

SDS

No data

Mobility in Soil

Tris-Base

Log Koc 1.57-1.85

MES

No data

SDS

Log Koc 1.545

Results of PBT and vPvB Assessment

Tris-Base

Not a PBT or vPvB

MES

No data

SDS

Not PBT vPvB

Other Adverse Effects

Tris-Base

None

MES

None

SDS

None

SECTION 13: Disposal Considerations

Waste treatment methods

Waste Disposal Method

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

SECTION 14: Transport Information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15: Regulatory Information

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Tris-Base	No	No	No	Yes	No
MES	No	No	No	No	No
SDS	No	No	No	Yes	Yes

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

SECTION 16: Other Information

NFPA Codes

Health	1
Flammability	0
Reactivity	0

Dangers

Tris-Base

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

MES

H302 - Harmful if swallowed

H312 - Harmful in contact with skin.

H315 - Causes skin irritation.

H320 - Causes eye irritation.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

SDS

H302 - Harmful if swallowed

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.