

## SECTION 1: Product and Company Identification

### Identification of the substance or mixture

**Product Name:** Protease Inhibitor Cocktail [100X], Yeast / Fungi  
**Catalog #:** 10673, 10673-1

### 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

Product / Chemical Name	Description	Volume	Safety Information
Protease Inhibitor Cocktail [100X], Yeast / Fungi	Liquid	10673: 1 ml 10673-1: 2 ml	See below

### DMSO:

#### Emergency Overview

**OSHA Hazards:** Combustible Liquid, Target Organ Effect  
**Target Organs:** Eyes, Skin  
**GHS Classification:** Flammable liquids (Category 4)

#### GHS Label elements, including precautionary statements

**Pictogram:** none  
**Signal word:** Warning

**Hazard statement(s):**  
H227 Combustible liquid

**Precautionary statement(s):**  
none

#### HMIS Classification

Health hazard: 0  
Chronic Health Hazard: \*  
Flammability: 2  
Physical hazards: 0

#### NFPA Rating

Health hazard: 0  
Fire: 2  
Reactivity Hazard: 0

#### Potential Health Effects

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. May cause skin irritation.  
**Eyes:** May cause eye irritation.  
**Ingestion:** May be harmful if swallowed.

**Aggravated Medical Condition:** Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body

**1,10-phenanthroline:**

**Emergency Overview**

**OSHA Hazards:**

**Target Organs:**

**GHS Classification:** Acute toxicity, Oral (Category 3)  
Acute aquatic toxicity (Category 1)  
Chronic aquatic toxicity (Category 1)

**GHS Label elements, including precautionary statements**



**Pictogram:**

**Signal word:** Danger

**Hazard statement(s):**

H301 Toxic if swallowed.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s):**

P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

**HMIS Classification**

Health hazard: 2  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 0

**NFPA Rating**

Health hazard: 2  
Fire: 0  
Reactivity Hazard: 0

**AEBSF:**

**Emergency Overview**

**OSHA Hazards:** Target Organ Effect, Corrosive  
Target Organs: Eyes, Skin

**GHS Classification:** Flammable liquids (Category 4)  
Skin corrosion (Category 1B)  
Serious eye damage (Category 1)

**GHS Label elements, including precautionary statements**



**Pictogram:**

**Signal word:** warning

**Hazard statement(s):**

H302: Harmful if swallowed  
H314: Causes severe skin burns and eye damage

**Precautionary statement(s):**

P280 Wear protective gloves/eye protection/face protection.  
P305 + P351

+ P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/ physician.

#### HMIS Classification

Health hazard: 2  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 0

#### NFPA Rating

Health hazard: 2  
Fire: 0  
Reactivity Hazard: 0

#### Potential Health Effects

Inhalation: May be harmful if inhaled.  
Skin: May be harmful if absorbed through skin. Causes skin burns.  
Eyes: Causes eye burns.  
Ingestion: May be harmful if swallowed.

### SECTION 3: Composition / Information on Ingredients

Component	CAS Number	EC-No.	MW	Concentration	Chemical Formula
AEBSF, HCl	30827-99-7	-	239.69	100 mM	C <sub>8</sub> H <sub>10</sub> FNO <sub>2</sub> HCl
E-64	66701-25-5	-	357.41	1.5 mM	C <sub>15</sub> H <sub>27</sub> N <sub>5</sub> O <sub>5</sub>
Pepstatin A	26305-03-3	247-600-0	685.89	2 mM	C <sub>34</sub> H <sub>63</sub> N <sub>5</sub> O <sub>9</sub>
o-Phenanthroline	5144-89-8	200-629-2	198.22	500 mM	C <sub>12</sub> H <sub>8</sub> N <sub>2</sub> H <sub>2</sub> O
DMSO	67-68-5	200-664-3	78.13	-	C <sub>2</sub> H <sub>6</sub> OS

### SECTION 4: 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.

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

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

**If swallowed:** DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### SECTION 5: Firefighting Measures

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products:** Hazardous decomposition products formed under fire conditions— carbon oxides, sulfur oxides.

**Further information:** Use water spray to cool unopened containers.

### SECTION 6: Accidental Release Measures

**Personal precautions:** Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up:** Sweep up and shovel. Keep in suitable, closed containers for disposal.

## SECTION 7: Handling & Storage

### Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

### Conditions for safe storage:

#### 1,10-Phenanthroline:

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

Store under inert gas. hygroscopic

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous material causing chronic effects

Recommended storage temperature: room temperature

## SECTION 8: Exposure Controls / Personal Protection

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### 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).

#### Hand 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.

#### Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

#### Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

#### Hygiene measures

General industrial hygiene practice.

## 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

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**

Strong oxidizing agents, strong acids, strong bases

**Hazardous decomposition products**

No data available

**SECTION 11: Toxicological Information**

1,10-Phenanthroline:

<b>Acute toxicity:</b>	LD50 Oral - Rat - 132 mg/kg
<b>Skin corrosion/irritation:</b>	no data available
<b>Serious eye damage/eye irritation:</b>	no data available
<b>Respiratory or skin sensitization:</b>	no data available
<b>Germ cell mutagenicity:</b>	no data available

**Carcinogenicity**

<b>IARC:</b>	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.
<b>ACGIH:</b>	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.
<b>NTP:</b>	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.
<b>OSHA:</b>	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.

<b>Reproductive toxicity:</b>	no data available
<b>Teratogenicity:</b>	no data available
<b>Specific target organ toxicity – single exposure (GHS):</b>	no data available
<b>Specific target organ toxicity – repeated exposure (GHS):</b>	no data available
<b>Aspiration hazard:</b>	no data available

**Potential Health Effects**

<b>Inhalation:</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Skin:</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes:</b>	May cause eye irritation.
<b>Ingestion:</b>	May be harmful if swallowed.
<b>Signs and Symptoms of Exposure:</b>	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
<b>Synergistic effects:</b>	no data available
<b>Additional information:</b>	RTECS: SF8300000

**SECTION 12: Ecological Information****Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**Results of PBT and vPvB assessment**

no data available

**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

### 1,10-Phenanthroline:

**DOT (US)** UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solids, organic, n.o.s. (1,10-Phenanthroline)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

**IMDG** UN number: 2811 Class: 6.1 Packing group: III

EMS-No: F-A, S-A

Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (1,10-Phenanthroline)

Marine pollutant: yes

**IATA** UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (1,10-Phenanthroline)

### AEBSF:

**DOT (US)** UN number: 3261 Class: 8 Packing group: II

Proper shipping name: Corrosive solid, acidic, organic, n.o.s. (4-(2-Aminoethyl) benzenesulfonylfluoride hydrochloride)

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG** UN number: 3261 Class: 8 Packing group: II

EMS-No: F-A, S-B

Proper shipping name: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (4-(2-Aminoethyl) benzenesulfonylfluoride hydrochloride)

Marine pollutant: No

**IATA** UN number: 3261 Class: 8 Packing group: II

Proper shipping name: Corrosive solid, acidic, organic, n.o.s. (4-(2-Aminoethyl) benzenesulfonylfluoride hydrochloride)

## SECTION 15: Regulatory Information

### OSHA Hazards:

No known OSHA hazards

### SARA 302 Components:

SARA 302: No chemical 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 II, Section 313.

### SARA 311/312 Hazards:

[4-(2-Aminoethyl) benzenesulfonylfluoride hydrochloride: Acute health hazard

### Massachusetts Right To Know Components:

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

### Pennsylvania Right To Know Components:

1,10-Phenanthroline:	CAS-No. 66-71-7
[4-(2-Aminoethyl) benzenesulfonylfluoride hydrochloride]	CAS-No. 30827-99-7

### New Jersey Right To Know Components:

1,10-Phenanthroline:	CAS-No. 66-71-7
[4-(2-Aminoethyl) benzenesulfonylfluoride hydrochloride]	CAS-No. 30827-99-7

### 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

**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.