

SECTION 1: Product and Company Identification

Identification of the substance or mixture

Product Name: Protease Inhibitor Cocktail [100X], General
Catalog #: 10471, 10471-1

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)

Flammable liquids (Category 4), H227

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

GHS Label elements, including precautionary statements

Pictogram none
 Signal word Warning

Hazard statement(s)
 H227 Combustible liquid.

Precautionary statement(s)
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P280 Wear protective gloves/ eye protection/ face protection.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
 P403 + P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS

Strong hydrogen fluoride-releaser.
 Rapidly absorbed through skin.

SECTION 3: Composition / Information on Ingredients

Mixtures

Hazardous components

Component	Classification	Concentration
Dimethyl sulfoxide		
CAS-No. 67-68-5 EC-No. 200-664-3	Flam. Liq. 4; H227	>= 90 - <= 100%

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

SECTION 4: First Aid Measures

Description of first aid measures

General advice

Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate gel repeated until burning ceases. More serious skin exposures may require subcutaneous calcium gluconate except for digital areas unless the physician is experienced in this technique, due to the potential for tissue injury from increased pressure. Absorption can readily occur through the subungual areas and should be considered when undergoing decontamination. Prevention of absorption of the fluoride ion in cases of ingestion can be obtained by giving milk, chewable calcium carbonate tablets or Milk of Magnesia to conscious victims. Conditions such as hypocalcemia, hypomagnesemia and cardiac arrhythmias should be monitored for, since they can occur after exposure. 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

First treatment with calcium gluconate paste. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. 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

no data available

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

For personal protection see section 8.

Environmental precautions

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

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). 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 inhalation of vapor or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

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

Recommended storage temperature -20 °C

Store under inert gas. Hygroscopic. Do not store in glass

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

Component	CAS-No	Value	Control parameters	Basis
Dimethyl sulfoxide	67-68-5	TWA	250.000000 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

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

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. 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	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	87 °C (189 °F) - closed cup
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

Exposure to moisture may affect product quality.

Reacts dangerously with glass.

Heat, flames and sparks.

Incompatible materials

Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents, glass

Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides, Hydrogen chloride gas, Hydrogen fluoride

In the event of fire: see section 5

SECTION 11: Toxicological Information

Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

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

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.

Eyes - Eye disease - Based on Human Evidence

Eyes - Eye disease - Based on Human Evidence (Dimethyl sulfoxide)

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

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**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

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

NA-Number: 1993

Class: NONE

Packing group: III

Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

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

Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

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

Pennsylvania Right To Know Components

Dimethyl sulfoxide

CAS-No.

67-68-5

Revision Date

2007-03-01

New Jersey Right To Know Components

Dimethyl sulfoxide

CAS-No.

67-68-5

Revision Date

2007-03-01

4-(2-Aminoethyl) benzenesulfonylfluoride hydrochloride

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

Flam. Liq.	Flammable liquids
H227	Combustible liquid.

HMIS Rating

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

NFPA Rating

Health hazard:	0
Fire Hazard:	2
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.