

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2022
Date Updated: December 31, 2022

SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION -----

Product Name	Plant Protease Inhibitor Cocktail, 100X
Product Code(s)	BS384
Recommended Use	For Laboratory Research Use Only Not for Human or Animal Drug Use
Supplier	Bio Basic Asia Pacific Pte Ltd.
Address	2 International Business Park Road Strategy #01-04, Singapore 609930
Telephone	(+65) 6954 2519 (+65) 6491 5938
Email	sg@biobasic-asia.com

SECTION 2. ----- HAZARDS IDENTIFICATION -----

Emergency Overview

Target Organs

Eyes, Skin

WHMIS Classification

B3 Combustible Liquid

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):

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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 Store in a well-ventilated place

P501 Dispose of contents/container to an approved waste disposal plant

HMIS Classification

Health hazard: 0

Chronic health hazard: *

Flammability: 2

Physical hazards: 0

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

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

SECTION 3. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

Chemical Name	EC No.	CAS-No	Weight %
Bestatin hydrochloride	-	65391-42-6	<100
N-(trans-Epoxy succinyl)-L-leucine 4-guanidinobutylamide	-	66701-25-5	<100
Acetyl-leucine-leucine-arginal, hemisulfate	-	103476-89-7	<100
Aprotinin	-	9087-70-1	<100
Pepstatin A	247-600-0	26305-03-3	<100
o-Phenanthroline hydrate	200-629-2	5144-89-8	<100
Dimethyl sulfoxide	200-664-3	67-68-5	<100

SECTION 4. - - - - - 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) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

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

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

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 vapours, mist or gas. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Environmental precautions

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

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 AND STORAGE-----

Precautions for safe handling

Avoid inhalation of vapour or mist

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

For precautions see section 2

Conditions for safe storage, including any incompatibilities

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

Recommended storage temperature: -20°C

Do not store in glass

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

Control parameters

Exposure controls

Appropriate engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure

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.

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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).

Environmental exposure controls

Do not let product enter drains.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

Information on basic physical and chemical properties

Appearance	Form: Liquid
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Relative vapour density	No data available
Density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

Other safety information

No data available

SECTION 10. -----STABILITY AND REACTIVITY -----

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Conditions to avoid

Reacts dangerously with glass.
Heat, flames and sparks

Incompatible materials

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

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions - Carbon oxides, Sulphur oxides

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

Acute toxicity

Oral LD50

No data available

Inhalation LC50

No data available

Dermal LD50

No data available

Other information on acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

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.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation

May be harmful if inhaled. May cause respiratory tract irritation

Ingestion

May be harmful if swallowed

Skin

May be harmful if absorbed through skin. May cause skin irritation

Eyes

May cause eye irritation

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.

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SAFETY DATA SHEET

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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 -----

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 -----

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15. ----- REGULATORY INFORMATION -----

WHMIS Classification

B3 Combustible Liquid

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

SECTION 16. ----- OTHER INFORMATION -----

Further information: no limited for paper copy, just for internal uses.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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End of SDS