

1. Identification

Product Identifier	Krakatoa-CB23726
Other means of identification	
Product Number	CB23726
Recommended use	Research and Development only.
Recommended restrictions	None
Manufacturer	Cinder Biological, Inc. 1933 Davis Street, Suite 208 San Leandro CA 94577 www.cinderbio.com
Telephone	(510) 255-3236
Emergency telephone	In case of emergency call 911.

2. Hazard(s) identification

GHS Classification in accordance with 29 CFR 1910.1200

Physical hazards	Not Classified
Health hazards	Skin Irritation Category 2 Eye irritation Category 2 Respiratory Sensitization Category 1
OSHA defined hazards	Not Classified

Label elements



Signal Word	Danger
Hazard Statement	May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause skin irritation May cause eye irritation
Precautionary Statement	
Prevention	Wash thoroughly after handling. Avoid breathing mist. Wear protective gloves. In case of inadequate ventilation wear respiratory protection.
Response	If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage	If eye irritation persists: Get medical advice/attention
Disposal	Keep container tightly closed. Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/Information on ingredients

Chemical name	CAS number	Wt. %
Hazardous Ingredients		
Protease Enzyme	None assigned	< 1%
Other ingredients		
Water	7732-18-5	98.5-99.9%
Citric Acid	77-92-9	0.383-1.514%
Dipotassium phosphate	7758-11-4	0.172-0.683%

Composition Comments	The manufacturer has claimed the exact percentage as trade secret under the OSHA Hazard Communication Standard
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4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Eye contact	Rinse thoroughly with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	May cause an allergic reaction. Rhinitis, Asthma, Cough, Sneezing, Runny Nose, Shortness of breath. Skin and eye irritation, itching, rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the materials(s) involved and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid breathing mist/vapors. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for the ingredients
Biological limit values	No biological exposure limits noted for the ingredients
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering

controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection/Hand protection

Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing.

Respiratory Protection

If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Aqueous liquid
Color	Clear/slightly yellow
Odor	Odorless
Odor threshold	No information available
pH	3 – 6.5 (20°C)
Melting/freezing point	0°C
Initial boiling point/range	100°C
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability limit – lower (%)	No information available
Flammability limit – upper (%)	No information available
Vapor pressure	No information available
Vapor density	No information available
Density	1.0 g/cm ³ (20 °C)
Solubility (water)	Soluble in water.
Partition coefficient (n-octanol/water)	No information available
Auto-ignition temperature	No information available

Decomposition temperature	>170°C
Viscosity	8.90 x 10 ⁻⁴ Pa.s

10. Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Temperatures above 120°C.
Incompatible materials	None known.
Hazardous decomposition products	Carbon oxides.

11. Toxicological Information

Information on likely routes of exposure

Skin contact

Ingestion

Eye contact

Inhalation

Acute toxicity

Not classified based on available information.

Components:

Glycohydrolase enzyme:

Acute oral toxicity No data available

Acute dermal toxicity No data available

Acute inhalation toxicity No data available

Skin Corrosion Irritation

May cause skin irritation.

Components:

Glycohydrolase enzyme:

Skin Corrosion\Irritation May cause skin irritation based on similar materials.

Eye Corrosion Irritation

May cause eye irritation.

Components:

Glycohydrolase enzyme:

Eye Corrosion\Irritation May cause eye irritation based on similar materials.

Sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

Protease enzyme: Enzyme is shipped and stored in aqueous solutions and is not known to cause reactions.

Germ Cell Mutagenicity:

Not classified based on available information

Carcinogenicity:

Not classified based on available information

No component of this product present at $\geq 0.1\%$ is on the IARC, OSHA or NTP lists of carcinogens.

Reproductive Toxicity:

Not Classified based on available information

STOT -single exposure:

Not classified based on available information

STOT – repeated exposure:

Not classified based on available information

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous.
Persistence and degradability	No data available.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No data available.

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal instructions	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues/unused products	Dispose of in accordance with local regulations. Empty containers may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory Information

US Federal Regulations

OSHA HazCom

This product is a hazardous chemical as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

TSCA Inventory

All components of this product are not listed on the TSCA Active Inventory.

TSCA Section 12(b)

Not applicable.

SARA 313

Not regulated.

SARA 304 Emergency release notification

Not regulated.

CERCLA Hazardous

Not listed.

Substance List (40 CFR 302.4

SARA 302 Extremely hazardous substance

Not listed.

16. Other Information, date of preparation or last revision

Issue date

Revision date

Version no.

List of abbreviations

DOT: Department of Transportation (49 CFR 172.101).

IATA: International Air Transport Association.

IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

IMDG Code: International Maritime Dangerous Goods Code
LC50: Lethal Concentration, 50%.

LD50: Lethal Dose, 50%.

MARPOL: International Convention for the Prevention of Pollution from Ships.

PEL: Permissible Exposure Limit.

TWA: Time Weighted Average Value.

References

Internal technical data, data from raw material SDSs,
OECD eChem Portal search results

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text