

Section 1 – Product Information

Product Name: Orthozime		Supplier	The Ruhof Corporation
Product Code: 34549	Information Phone: 1-800-537-8463		Address 393 Sagamore Avenue Mineola NY 11501
Product Use: Medical Instrument Cleaning	Emergency Contact: 1-800-424-9300 (Chemtrec)		

Section 2 – Hazards Identification

GHS Classification This product is not classified as hazardous

Section 2.1 Label Elements

Hazard Pictograms Not Applicable	Precautionary Statements Prevention <ul style="list-style-type: none"> • Wear eye/face protection. • Avoid breathing dust/fume/gas/mist/vapors/spray. • In case of inadequate ventilation wear respiratory protection. Eyes <ul style="list-style-type: none"> • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. • Immediately call a POISON CENTER or doctor/physician. Inhalation <ul style="list-style-type: none"> • IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing • If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Signal Word: Not Applicable	
Hazard Statements: Not Applicable	

Section 3 – Composition/Information on Ingredients

Chemical Name	CAS-No	Weight %	Trade secret
Subtilisins (proteolytic enzymes)	9014-01-1	Below reportable limit	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

General Advice	If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Immediate medical attention is required.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

May cause sensitization by inhalation Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Prevent entry into waterways, sewers, basements or confined areas.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Use only in area provided with appropriate exhaust ventilation. Do not eat, drink or smoke when using this product.

Storage Keep in properly labeled containers. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Subtilisins (proteolytic enzymes)	Ceiling: 0.00006 mg/m3 as crystalline active enzyme	(vacated) STEL: 0.00006 mg/m3	Ceiling: 0.00006 mg/m3 as crystalline active enzyme

Appropriate engineering controls

Engineering Measures Showers, Eyewash stations, Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety goggles.

Skin and Body Protection Lightweight protective clothing. Impervious gloves.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Odor	Appearance	pH	Melting Point/Range	Boiling Point
Liquid	Tropical	Green	6-8	No data available	>100C
Flash Point	Flammability Limits	Vapor Pressure	Specific Gravity	Water Solubility	Flammable Properties
No data available	No data available	No data available	1.01-1.03	Soluble	Not Flammable

10. STABILITY AND REACTIVITY

Reactivity	No data available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	None under normal processing.
Hazardous Polymerization	Hazardous polymerization does not occur.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied

11. TOXICOLOGICAL INFORMATION

Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.		
Eye Contact	Irritating to eyes. Causes serious eye damage.		
Skin Contact	May cause irritation.		
Ingestion	There is no data available for this product.		
Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Subtilisins (proteolytic enzymes)	= 3700 mg/kg (Rat)	-	-

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization	May cause sensitization of susceptible persons. May cause sensitization by inhalation.
Carcinogenicity	Contains no ingredients above reportable quantities listed as a carcinogen.
Chronic Toxicity	Avoid repeated exposure. Repeated contact may cause allergic reactions in very susceptible persons.
Target Organ Effects	Respiratory system. Eyes. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity	The product is not expected to be hazardous to the environment.
Persistence and Degradability	No information available.
Bioaccumulation	The product does not contain any substances expected to be bioaccumulating.
Other Adverse Effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Dispose of in accordance with federal, state, and local regulations
Contaminated Packaging	Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT	The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).
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15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU Legislation	The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 453/2010 of 20th May 2010 amending regulation (EC) No 1907/2006
National Regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. No. 1689.Workplace Exposure Limits 2005 (EH40)

16. OTHER INFORMATION

NFPA	Health Hazard 1	Flammability 0	Instability 0	Physical and Chemical Hazards -
HMS	Health Hazard 1	Flammability 0	Physical Hazard 0	Personal Protection X



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General 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.

End of Safety Data Sheet