

Material Safety Data Sheet

Version 4.1 Revised 2022-07-15

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Name Peroxidase, Horseradish [HRP] >250U/MG, RZ>3.0
Product Code(s) A3610
Recommended Use For Further Manufacturing Use Only
Not for Human or Animal Drug Use

Company

Biomatik Corporation
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Kitchener, Ontario, N2C 1N6, Canada

Emergency Telephone Number Chemtrec 1-800-424-9300

Company Phone Number 1-800-836-8089
E-mail Address info@biomatik.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Classification Skin Irritant 2 Eye Irritant 2 Respiratory Sensitizer 1 Skin Sensitizer 1

Signal Word Danger



Hazard Statements H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation H317 - May cause an allergic skin reaction H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Peroxidase	EEC No. 232-668-6	Not available	9003-99-0	95-100	-

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes
Inhalation	Move to fresh air. If breathing becomes difficult, give oxygen
Ingestion	Clean mouth with water and afterwards drink plenty of water
Notes to Physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable
Flash Point	Not determined
Suitable Extinguishing Media	Dry chemical, CO ₂ , alcohol-resistant foam or water spray.
Hazardous Combustion Products	Carbon oxides
<u>Explosion Data</u>	
Sensitivity to Mechanical Impact	Not sensitive
Sensitivity to Static Discharge	Not sensitive
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	Avoid contact with the skin and the eyes. Use personal protective equipment. Ensure adequate ventilation.
Methods for Containment	Prevent further leakage or spillage if safe to do so
Methods for Cleaning Up	Pick up and transfer to properly labeled containers

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice.
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Storage

Keep containers tightly closed in a dry, cool and well-ventilated place

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Peroxidase 9003-99-0			

Engineering MeasuresShowers
Eyewash stations
Ventilation systems**Personal Protective Equipment****Eye/Face Protection**

Safety glasses with side-shields. Avoid contact with eyes.

Skin and Body Protection

Wear protective gloves/clothing.

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light-brown	
Odor	No information available	
Odor Threshold	No information available	
Decomposition Temperature °C	No information available	
Freezing Point	No information available	
Initial Boiling Point	No information available	
Physical State	Lyophilized Powder	
pH	No data available	
Flash Point	Not determined	
Autoignition Temperature	No data available	
Boiling Point/Range	No data available	
Melting Point/Range	No data available	
Flammability Limits in Air	Upper No data available	Lower No data available
Explosive Properties	No information available	
Oxidizing Properties	No information available	
Evaporation Rate	No data available	
MMHG @ 37.8 C	No data available	
Vapor Density	No data available	
Specific Gravity	No data available	
Solubility	No information available	
Partition Coefficient (n-octanol/water)	No data available	
Viscosity	No information available	

10. STABILITY AND REACTIVITY**Stability**

Stable under recommended storage conditions

Incompatible Products

None known based on information supplied

Conditions to Avoid None known based on information supplied

Hazardous Decomposition Products Carbon oxides

Hazardous Polymerization Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Causes skin, eye and respiratory tract irritation.

Chronic Toxicity

Chronic Toxicity No known effect based on information supplied

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

14. TRANSPORT INFORMATION

IATA Not regulated

DOT Not regulated

15. REGULATORY INFORMATION

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Peroxidase	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Peroxidase 9003-99-0 (95-100)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
IECSC	Complies
KECL	Complies
PICCS	Does not Comply
AICS	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990

CERCLA

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico - Grade

No information available.

Canada

WHMIS Hazard Class

D2A Very toxic materials

D2B Toxic materials



16. OTHER INFORMATION

Issuing Date 15-Jun-2009

Revision Date 25-July-2011

Revision Note

No information available.

Recommended Restrictions No information available

Disclaimer

The information provided on this MSDS 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 MSDS