



SAFETY DATA SHEET PEROXIDASE

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	PEROXIDASE
Synonyms; trade names	HRP, HORSERADISH PEROXIDASE
CAS number	9003-99-0
EC number	232-668-6

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	For research use only.
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1.3. Details of the supplier of the safety data sheet

Supplier	Web: www.bio-rad-antibodies.com Bio-Rad Endeavour House Langford Business Park Kidlington Oxford OX5 1GE Tel. +44 (0)1865 852700 antibody_safetydatasheets@bio-rad.com
Contact person	Technical Services Manager

1.4. Emergency telephone number

Emergency telephone	+1 7037415970 (CHEMTREC)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

Classification (67/548/EEC or 1999/45/EC) -

2.2. Label elements

EC number	232-668-6
Hazard statements	NC Not Classified

2.3. Other hazards

No information available.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	PEROXIDASE
CAS number	9003-99-0
EC number	232-668-6

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Due to the small packaging, the risk of inhalation is minimal. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Due to the small packaging, the risk of ingestion is minimal. Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
Skin contact	Due to the small packaging, the risk of skin contact is minimal. Rinse with water. Get medical attention if any discomfort continues.
Eye contact	Due to the small packaging, the risk of eye contact is minimal. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	May cause coughing or mild irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Specific hazards	7.2
Hazardous combustion products	Does not decompose when used and stored as recommended.

5.3. Advice for firefighters

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of dust. Avoid contact with skin and eyes.

6.2. Environmental precautions

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Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid inhalation of dust and contact with skin and eyes. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep only in the original container. Store at specified temperature. Refer to product label.

Storage class Refer to product datasheet.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact. Wear apron or protective clothing in case of contact.

Hygiene measures

Provide eyewash station. Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. Wash promptly with soap and water if skin becomes contaminated.

Respiratory protection

No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Dusty powder.

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Colour	Red-brown.
Odour	No characteristic odour.
Melting point	Not determined.
Initial boiling point and range	<100 @°C @ 760 mm Hg
Flash point	Not determined.
Evaporation rate	Not applicable.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not determined.
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not determined.
Oxidising properties	Not determined.

9.2. Other information

Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Not determined.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not determined.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Not determined.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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Toxicological effects	No information available.
Other health effects	IARC Not Listed.
<u>Skin corrosion/irritation</u>	
Extreme pH	7.2
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not determined.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Not determined.
Genotoxicity - in vivo	Not determined.
<u>Carcinogenicity</u>	
Carcinogenicity	Not determined.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Not determined.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not determined.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not determined.
<u>Aspiration hazard</u>	
Aspiration hazard	Not determined.
General information	
General information	No specific health hazards known.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	May cause discomfort if swallowed.
Skin contact	Liquid may irritate skin.
Eye contact	Vapour or spray in the eyes may cause irritation and smarting.
Acute and chronic health hazards	Because of the product's quantity and composition, the health hazard is regarded as low.
Route of exposure	Skin and/or eye contact
Medical symptoms	No specific symptoms noted.

SECTION 12: Ecological Information

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish Not determined.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

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Partition coefficient Not determined.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment No information available

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Road transport notes Not classified.

Rail transport notes Not classified.

Sea transport notes Not classified.

Air transport notes Not classified.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Guidance Workplace Exposure Limits EH40.
Approved Classification and Labelling Guide (Sixth edition) L131.
Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information Only trained personnel should use this material.

Revision date 21/09/2018

Revision 2

Supersedes date 10/03/2016

SDS number 20188

Risk phrases in full Not classified.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.