

14078 Meridian Parkway, Riverside, CA. 92518

SAFETY DATA SHEET

Version: v1

Revision Date: 2024-01-25

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

1.1 Product identifiers

Product name : Horseradish Peroxidase (HRP)

Product Number : P105528
Brand : aladdin
CAS-No. : 9003-99-0

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

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION

Address : 14078 Meridian Parkway,

Riverside, CA. 92518

Telephone : +1 (833) 552-7181 Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300

CHEMTREC®. Outside the USA :

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Respiratory sensitization (Category 1), H334 Skin sensitization (Category 1), H317

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H317 May cause an allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H402 Harmful to aquatic life

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.



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P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 [In case of inadequate ventilation] Wear respiratory protection.

P302+P352 IF ON SKIN: wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P342+P311 IF experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Hydrogen-peroxide oxidoreductase

Formula : no data available

Molecular weight : no data available

CAS No. : 9003-99-0

EC-NO. : 232-668-6

| Component | Classification | Concentration |
|---------------------------------|-------------------|-------------------|
| Horseradish Peroxidase (HRP) | | |
| | no data available | ≥250 U/mg,Rz≥3 |

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.



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4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known. Combustible. Development of hazardous combustion gases or vapours possible in the event of fire

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.



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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling Work under hood. Do not inhale substance/mixture. Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions Store away from heat. Tightly closed. Dry. Keep locked up or in an area accessible only to qualified or authorized persons. Storage stability Recommended storage temperature -20 °C Storage class Storage class (TRGS 510): 11: Combustible Solids

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls no data available

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L Body Protection

protective clothing

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure



a) Appearance

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Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

no data available

| a) / ippourarioo | no data avanabio |
|--|-------------------|
| b) Odour | no data available |
| c) Odour Threshold | no data available |
| d) pH | no data available |
| e) Melting point/freezing point | no data available |
| f) Initial boiling point and boiling range | no data available |
| g) Flash point | no data available |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or | |
| explosive limits | no data available |
| k) Vapour pressure | no data available |
| | |

I) Vapour density no data available m) Relative density no data available n) Water solubility no data available o) Partition coefficient: n-octanol/water no data available p) Auto-ignition temperature no data available q) Decomposition temperature no data available r) Viscosity no data available s) Explosive properties N no data available t) Oxidizing properties N no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Violent reactions possible with: Strong oxidizing agents



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10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Skin corrosion/irritation

Skin - Rabbit Result: No irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

Test Type: Chromosome aberration test in vitro Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: Ames test Test system:

S. typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 26,2 mg/l - 48 h (OECD Test Guideline 202)



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12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 91 % - Readily biodegradable. (OECD Test Guideline 301E) Remarks: The 10 day time window criterion is not fulfilled.

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Contaminated packaging

no data available

SECTION 14: Transport information

DOT (US)

UN number: no data available Packing group: no data available Class: no data available

Proper shipping name: Not dangerous Reportable Quantity(RQ): no data Poison Inhalation Hazard: no data

goods available available

Environmental Hazards: no

IMDG

UN number: no data available Packing group: no data available EMS-No: no data available

Proper shipping name: Not dangerous goods

 IATA

UN number: no data available Packing group: no data available Class: no data available

Proper shipping name: Not dangerous goods

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.



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SECTION 16: Other information

Regulatory Affairs

Prepared By ALADDIN SCIENTIFIC CORPORATION

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