# Chemical Safety Data Sheet MSDS / SDS

# **Peroxidase**

Revision Date: 2025-11-01 Revision Number: 1

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

#### **Product identifier**

Product name : Peroxidase

CBnumber : CB7180097

CAS : 9003-99-0

EINECS Number : 232-668-6

Synonyms : Peroxidase,hrp

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

#### **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 010-86108875

# SECTION 2: Hazards identification

# GHS Label elements, including precautionary statements

#### Pictogram(s)

Signal word

Danger

#### Hazard statement(s)

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

#### Prevention

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

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

#### Response

P342+P316 If experiencing respiratory symptoms: Get emergency medical help immediately.

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

#### Storage

none

#### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

# SECTION 3: Composition/information on ingredients

#### **Substance**

Product name : Peroxidase

Synonyms : Peroxidase,hrp

CAS : 9003-99-0

EC number : 232-668-6

MF : NULL

# SECTION 4: First aid measures

#### Description of first aid measures

#### General advice

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

#### 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.

# 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

#### Indication of any immediate medical attention and special treatment needed

No data available

# **SECTION 5: Firefighting measures**

# **Extinguishing media**

#### Suitable extinguishing media

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

## 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.

#### 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.

#### **Further information**

Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6: Accidental release measures

#### 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.

#### **Environmental precautions**

Do not let product enter drains.

#### 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.

#### Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

### 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.

#### 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 2 - 8 °C

#### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

### control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

#### **Exposure controls**

#### 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

 $\label{eq:minimum layer thickness: 0,11 mm Break through time: 480 min} Minimum layer thickness: 0,11 mm Break through time: 480 min$ 

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

Do not let product enter drains.

# SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance brown solid

| Odour                                   | No data available   |
|---|---|
| Odour Threshold                         | No data available   |
| рН                                      | No data available   |
| Melting point/freezing point            | No data available   |
| Initial boiling point and boiling range | No data available   |
| Flash point                             | No data available   |
| Evaporation rate                        | No data available   |
| Flammability (solid, gas)               | No data available   |
| Upper/lower flammability or explosive   | No data available   |
| limits                                  |   |
| Vapour pressure                         | No data available   |
| Vapour density                          | No data available   |
| Relative density                        | No data available   |
| Water solubility                        | H <sub>2</sub> O: soluble   |
| Partition coefficient: n-octanol/water  | No data available   |
| Autoignition temperature                | No data available   |
| Decomposition temperature               | No data available   |
| Viscosity                               | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |
| Explosive properties                    | No data available   |
| Oxidizing properties                    | No data available   |
|   |   |

# SECTION 10: Stability and reactivity

# Reactivity

No data available

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

## **Chemical stability**

Other safety information

The product is chemically stable under standard ambient conditions (room temperature) .

# Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents

#### Conditions to avoid

no information available

# Incompatible materials

Strong oxidizing agents

#### Hazardous decomposition products

In the event of fire: see section 5

# **SECTION 11: Toxicological information**

#### Information on toxicological effects

**Acute toxicity** 

Oral

Skin corrosion/irritation

Skin - Rabbit

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

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitization

May cause allergic respiratory and skin reactions

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

# SECTION 12: Ecological information

### **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)

## 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.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### 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.

#### Other adverse effects

Harmful to aquatic life.

# **SECTION 13: Disposal considerations**

#### Waste treatment methods

#### **Product**

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

# **SECTION 14: Transport information**

#### **UN** number

ADR/RID: - IMDG: - IATA: -

### **UN proper shipping name**

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

# Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

#### **Packaging group**

ADR/RID: - IMDG: - IATA: -

## **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

### Special precautions for user

#### **Further information**

Not classified as dangerous in the meaning of transport regulations.

# SECTION 15: Regulatory information

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

#### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: https://www.mem.gov.cn/

#### Measures for Environmental Management of New Chemical Substances

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: https://www.mee.gov.cn/

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: https://echa.europa.eu/

Korea Existing Chemicals List (KECL):Listed. website: http://ncis.nier.go.kr

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Not Listed. website: https://emb.gov.ph/

Vietnam National Chemical Inventory:Listed. website: https://chemicaldata.gov.vn/

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: https://www.epa.gov/

New Zealand Inventory of Chemicals (NZIoC):Listed. website: https://www.epa.govt.nz/

# SECTION 16: Other information

#### Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit TWA: Time Weighted Average

#### References

[1] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

[2] ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

[3] ECHA - European Chemicals Agency, website: https://echa.europa.eu/

[4] eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en

[5] ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

[6] Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

- [7] HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- [8] IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- [9] IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- 【10】 Sigma-Aldrich, website: https://www.sigmaaldrich.com/

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.