

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Reference number: P0517 Issue date: 26/07/2023 Revision date: 26/07/2023 Supersedes version of: 10/07/2023 Version: 3.2

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

1.1. Product identifier

| Product form | : Substance |
|-------------------------------|-------------------------|
| Trade name | : Potassium hydroxide |
| EC-No. | : 215-181-3 |
| CAS-No. | : 1310-58-3 |
| REACH registration No. | : 01-2119487136-33-xxxx |
| C&L notification reference no | : 019-002-00-8 |
| Product code | : P0517 |
| Formula | : KOH |
| Synonyms | : Kalium hydroxide |
| Product group | : Raw material |
| | |

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

1.2.1. Relevant identified uses

| Main use category |
|----------------------------------|
| Industrial/Professional use spec |

- : Professional use
- : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

1.2.2. Uses advised against

No additional information available

Supplier

Duchefa Biochemie B.V. A. Hofmanweg 71 2031 BH Haarlem The Netherlands T +31(0)23-5319093 - F +31(0)23-5318027 info@duchefa.nl

1.4. Emergency telephone number

Emergency number

: Supplier contact information: +31(0)23-5319093 (M-F 09:00-17:00) +31(0)6-30008100 (outside office hours)

| Country | Organisation/Company | Address | Emergency number | Comment |
|---------|---|--|------------------|---|
| | World Health Organization world directory of poison centres | http://apps.who.int/poiso ncentres/ | | Consult website for a local poison centre |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

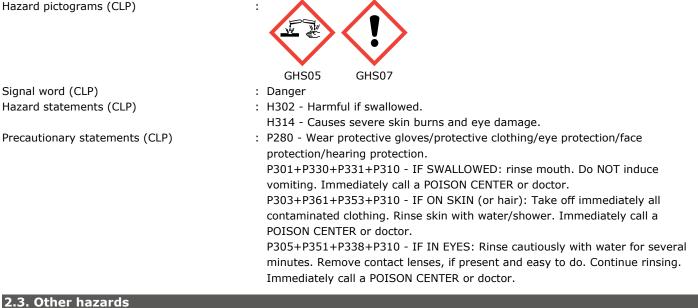
| Acute toxicity (oral), Category 4 | H302 |
|--|------|
| Skin corrosion/irritation, Category 1, Sub-Category 1A | H314 |
| Full text of H- and EUH-statements: see section 16 | |

Adverse physicochemical, human health and environmental effects

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Labelling according to Regulation (EC) No. 1272/2008 [CLP]



No additional information available

| SECTION 3: Composition/information on ingredients 3.1. Substances | | | |
|---|--|------|--|
| Name | Product identifier | % | |
| Potassium hydroxide | CAS-No.: 1310-58-3 EC-No.: 215-181-3 REACH-no: 01- 2119487136-33-xxxx | > 85 | |

3.2. Mixtures

Not applicable

| SECTION 4: First aid measure | S |
|---------------------------------------|---|
| 4.1. Description of first aid meas | ures |
| First-aid measures general | : Seek medical attention if ill effect or irritation develops. |
| First-aid measures after inhalation | : Remove victim to fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | Wash skin with plenty of water. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Seek medica advice. |
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Seek medical advice. |
| First-aid measures after ingestion | : Rinse mouth out with water. Get immediate medical advice/attention. |
| 4.2. Most important symptoms a | nd effects, both acute and delayed |
| Symptoms/effects | : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Redness, pain. Corrosive to eyes, respiratory system and |

skin.

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

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| SECTION 5: Firefighting measur | es |
|--|---|
| 5.1. Extinguishing media | |
| Suitable extinguishing media | : Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2). Water spray. |
| 5.2. Special hazards arising from th | e substance or mixture |
| No additional information available | |
| 5.3. Advice for firefighters | |
| Firefighting instructions Protection during firefighting | Prevent fire fighting water from entering the environment. Do not enter fire area without proper protective equipment, including respiratory protection. |
| SECTION 6: Accidental release r | neasures |
| 6.1. Personal precautions, protective | e equipment and emergency procedures |
| General measures | : Wear proper protective equipment. |
| 6.1.1. For non-emergency personnel Measures in case of dust release | : Use good housekeeping practices to avoid rendering dust airborne. |
| 6.1.2. For emergency responders No additional information available | |
| 6.2. Environmental precautions | |
| Prevent entry to sewers and public waters. | |
| 6.3. Methods and material for conta | ainment and cleaning up |
| Methods for cleaning up | : Sweep up dry powder and dispose properly. Use non-corrodable disposal containers. |
| 6.4. Reference to other sections | |
| No additional information available | |
| SECTION 7: Handling and storage | je |
| 7.1. Precautions for safe handling | |

| Precautions for safe handling | : Handle in accordance with good industrial hygiene and safety procedures. |
|-------------------------------------|--|
| 7.2. Conditions for safe storage, i | ncluding any incompatibilities |
| Storage conditions | : Store in dry, well-ventilated area. Store at room temperature. Keep container tightly closed and protected from light. |
| Special rules on packaging | : Store in original container or corrosive resistant and/or lined container. |
| | |

7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

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8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

| Eye protection | | | |
|----------------|----------------------|-----------------|----------|
| Туре | Field of application | Characteristics | Standard |
| Safety glasses | Dust | | EN 166 |

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection

| Туре | Material | Permeation | Thickness (mm) | Penetration | Standard |
|--------|----------------------|-------------------|----------------|-------------|------------|
| Gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,11 | | EN ISO 374 |

8.2.2.3. Respiratory protection

| Respiratory protection | | | |
|------------------------|-------------|-----------------|----------|
| Device | Filter type | Condition | Standard |
| Dust mask | Туре Р2 | Dust protection | EN 143 |

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

| SECTION 9: Physical and chemical properties | | |
|--|-----------------|--|
| 9.1. Information on basic physical and chemical properties | | |
| Physical state | : Solid | |
| Colour | : White. | |
| Appearance | : Crystals. | |
| Molecular mass | : 56,11 g/mol | |
| Odour | : Odourless. | |
| Odour threshold | : Not available | |
| | | |

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| Melting point | : 360 °C |
|--|----------------------------|
| Freezing point | : Not available |
| Boiling point | : 1320 °C |
| Flammability | : Not available |
| Explosive limits | : Not applicable |
| Lower explosion limit | : Not applicable |
| Upper explosion limit | : Not applicable |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : Not available |
| pH | : ≈ 14 (56 g/l, 20 °C) |
| pH solution | : Not available |
| Viscosity, kinematic | : Not applicable |
| Solubility | : Water: 1120 g/l at 20 °C |
| Partition coefficient n-octanol/water (Log | : Not available |
| Kow) | |
| Vapour pressure | : Not available |
| Vapour pressure at 50°C | : Not available |
| Density | : 2,04 g/cm ³ |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not applicable |
| Particle size | : Not available |
| | |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions. Exothermic reaction with water.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

React in contact of. Strong acids. Organic products. Metals.

10.4. Conditions to avoid

Moisture.

10.5. Incompatible materials

Metals. Attacks metals.

10.6. Hazardous decomposition products

Reacts with water, generates heat.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation) : Harmful if swallowed.

- : Not classified
- : Not classified

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| Potassium hydroxide (1310-58-3) | |
|-------------------------------------|--|
| LD50 oral rat | 273 mg/kg |
| Skin corrosion/irritation : | Causes severe skin burns. pH: ≈ 14 (56 g/l, 20 °C) |
| Serious eye damage/irritation : | Assumed to cause serious eye damage pH: \approx 14 (56 g/l, 20 °C) |
| Respiratory or skin sensitisation : | Not classified |
| Germ cell mutagenicity : | Not classified |
| Carcinogenicity : | Not classified |
| Reproductive toxicity : | Not classified |
| STOT-single exposure : | Not classified |
| STOT-repeated exposure : | Not classified |
| Aspiration hazard : | Not classified |

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Other information

: See actual entry in RTECS for complete information: TT2100000

| SECTION 12: Ecological information | | |
|--|--|--|
| 12.1. Toxicity | | |
| Hazardous to the aquatic environment, : short-term (acute) Hazardous to the aquatic environment, long- : term (chronic) | Not classified Not classified | |
| Potassium hydroxide (1310-58-3) | | |
| LC50 - Fish [1] | 80 mg/l Gambusia affinis (Mosquito fish) | |
| 12.2. Persistence and degradability | | |
| No additional information available | | |
| 12.3. Bioaccumulative potential | | |
| No additional information available | | |
| 12.4. Mobility in soil | | |
| No additional information available | | |
| 12.5. Results of PBT and vPvB assessm | ent | |
| No additional information available | | |
| 12.6. Endocrine disrupting properties | | |
| No additional information available | | |
| 12.7. Other adverse effects | | |
| | May cause pH changes in aqueous ecological systems. Prevent entry to sewers and public waters. Avoid release to the environment | |

| SECTION 13: Disposal considerations | | |
|-------------------------------------|---|--|
| 13.1. Waste treatment metho | ds | |
| Waste treatment methods | : Dispose in a safe manner in accordance with local/national regulations. | |

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Additional information

: When not empty dispose of this container at hazardous or special waste collection point.

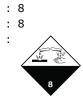
SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

| UN-No. (ADR) | : UN 1813 |
|---------------------------------------|---|
| UN-No. (IMDG) | : UN 1813 |
| UN-No. (IATA) | : UN 1813 |
| 14.2. UN proper shipping name | |
| Proper Shipping Name (ADR) | : POTASSIUM HYDROXIDE, SOLID (potassium hydroxide; caustic potash) |
| Proper Shipping Name (IMDG) | : POTASSIUM HYDROXIDE, SOLID (potassium hydroxide; caustic potash) |
| Proper Shipping Name (IATA) | : Potassium hydroxide, solid (potassium hydroxide; caustic potash) |
| Transport document description (ADR) | : UN 1813 POTASSIUM HYDROXIDE, SOLID (potassium hydroxide; caustic potash), 8, II, (E) |
| Transport document description (IMDG) | UN 1813 POTASSIUM HYDROXIDE, SOLID (potassium hydroxide; caustic potash), 8, II |
| Transport document description (IATA) | : UN 1813 Potassium hydroxide, solid (potassium hydroxide; caustic potash), 8, II |

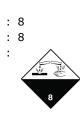
ADR

Transport hazard class(es) (ADR) Danger labels (ADR)



IMDG

Transport hazard class(es) (IMDG) Danger labels (IMDG)



ΙΑΤΑ

Transport hazard class(es) (IATA) Danger labels (IATA)

: 8 : 8 : *

| : II |
|--|
| : II |
| : II |
| |
| : No |
| : No |
| : No supplementary information available |
| |

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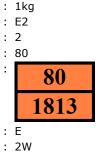
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14.6. Special precautions for user

Special transport precautions

: The driver shall not attempt to deal with any fire of the load, NOTIFY POLICE AND FIRE BRIGADE IMMEDIATELY

Overland transport Classification code (ADR) Limited quantities (ADR) Excepted quantities (ADR) Transport category (ADR) Hazard identification number (Kemler No.) Orange plates



: C6

Tunnel restriction code (ADR) EAC code

Transport by sea

| EmS-No. (Fire) | : F-A |
|------------------------------------|----------------------------------|
| EmS-No. (Spillage) | : S-B |
| Stowage category (IMDG) | : A |
| Segregation (IMDG) | : SG35 |
| Properties and observations (IMDG) | : White pellets, flakes, lumps o |
| | |

White pellets, flakes, lumps or solid blocks, deliquescent. Reacts with ammonium salts, evolving ammonia gas. In the presence of moisture, corrosive to aluminium, zinc and tin. Causes burns to skin, eyes and mucous membranes. Reacts violently with acids.

Air transport

| PCA Excepted quantities (IATA) | : | E2 |
|--|---|------|
| PCA Limited quantities (IATA) | : | Y844 |
| PCA limited quantity max net quantity (IATA) | : | 5kg |
| PCA packing instructions (IATA) | : | 859 |
| PCA max net quantity (IATA) | : | 15kg |
| CAO packing instructions (IATA) | : | 863 |
| CAO max net quantity (IATA) | : | 50kg |
| ERG code (IATA) | : | 8L |

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

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POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Ensure all national/local regulations are observed.

Germany

| Water hazard class (WGK) | : | WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 |
|---|-----|--|
| | | or 2; ID No. 345). |
| Hazardous Incident Ordinance (12. BImSchV |) : | Is not subject of the Hazardous Incident Ordinance (12. BImSchV) |

Netherlands

| SZW-lijst van kankerverwekkende stoffen SZW-lijst van mutagene stoffen SZW-lijst van reprotoxische stoffen – | The substance is not listedThe substance is not listedThe substance is not listed |
|--|---|
| Borstvoeding SZW-lijst van reprotoxische stoffen – Vruchtbaarheid | : The substance is not listed |
| SZW-lijst van reprotoxische stoffen – Ontwikkeling | : The substance is not listed |
| Denmark | |

Danish National Regulations

: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

| Indication of changes | | | | |
|-----------------------|--|----------|----------|--|
| Section | Changed item | Change | Comments | |
| | Supersedes | Modified | | |
| | Revision date | Modified | | |
| | Issue date | Modified | | |
| 3 | Composition/information on ingredients | Modified | | |

| Abbreviations and acronyms: | | |
|-----------------------------|---|--|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways | |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road | |
| ATE | Acute Toxicity Estimate | |
| BCF | Bioconcentration factor | |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 | |

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| Abbreviations and acronyms: | | |
|-----------------------------|---|--|
| DPD | Dangerous Preparations Directive 1999/45/EC | |
| DSD | Dangerous Substances Directive 67/548/EEC | |
| EC50 | Median effective concentration | |
| ΙΑΤΑ | International Air Transport Association | |
| IMDG | International Maritime Dangerous Goods | |
| LC50 | Median lethal concentration | |
| LD50 | Median lethal dose | |
| PBT | Persistent Bioaccumulative Toxic | |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 | |
| SDS | Safety Data Sheet | |

Data sources

: Manufacturer. ECHA (European Chemicals Agency). REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

| Full text of H- and EUH-statements: | | |
|-------------------------------------|--|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 | |
| H302 | Harmful if swallowed. | |
| H314 | Causes severe skin burns and eye damage. | |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1, Sub-Category 1A | |

Safety Data Sheet (SDS), EU Duchefa 2023