Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 *Reviewed on 05/10/2025*

1 Identification

· **Product identifier**
· **Trade name: Potassium hydroxide 5-6%**
· **Other means of identification**
· **Article number:** CH5203
· **Application of the substance / the mixture** Chemicals products for laboratory

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
CARLO ERBA REAGENTS
Chaussée du Vexin
Parc d'Affaires des Portes - BP616
27106 VAL DE REUIL Cedex
Téléphone: +33 (0)2 32 09 20 00
Télécopie: +33 (0)2 32 09 20 20
· **Information department:**
Q.A / Normative
email: MSDS_CER-SDS@cer.dgroup.it
· **Emergency telephone number:**
US 911
CHEMTREC 1-800-424-9300 (Staffed 24/7)
American Association of Poison Control Centers 1-800-222-1222 (Staffed 24/7)

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS05 Corrosion

Skin corrosion 1A Causes severe skin burns and eye damage.
Eye damage 1 Causes serious eye damage.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Potassium hydroxide
· **Hazard statements**
Causes severe skin burns and eye damage.
· **Precautionary statements**
Wear eye protection / face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call a poison center/doctor.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 1)

· **Information pertaining to particular dangers for man and environment:**
· **Classification system:**
· **NFPA ratings (scale 0-4)**

Health = 3
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Classification according to (d)(1)(ii) of § 1910.1200**
The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.
· **Hazards not otherwise classified**
There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:**
Mixture made by the following substances:

CAS: 7732-18-5 EINECS: 231-791-2 RTECS: ZC 0110000	water, distilled, conductivity or of similarpurity	≤100%

· **Dangerous components:**

CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8 RTECS: TT 2102000	Potassium hydroxide	5-<6%

4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Do not induce vomiting; immediately call for medical help.
Call immediately a doctor.
Rinse out mouth and then drink plenty of water.
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 2)

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** Do not inhale explosion gases or combustion gases.
· **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
CAS: 1310-58-3	Potassium hydroxide	0.18 mg/m³

· **PAC-2:**		
CAS: 1310-58-3	Potassium hydroxide	2 mg/m³

· **PAC-3:**		
CAS: 1310-58-3	Potassium hydroxide	54 mg/m³

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
When diluting, always stir the product into standing water, not water to product.
· **Information about protection against explosions and fires:** The product is not flammable.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Provide floor trough without outlet.
Use only receptacles specifically permitted for this substance/product.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Protect from frost.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 3)

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 1310-58-3 Potassium hydroxide	
REL	Ceiling limit value: 2 mg/m³
TLV	Ceiling limit value: 2 mg/m³

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes and skin.
· **Protection of hands:**
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Protective gloves

Rubber gloves
Avoid direct contact with the chemical/ the product/ the preparation by organizational measures.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **For the permanent contact gloves made of the following materials are suitable:**
The penetration time has to be at least 480 minutes
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.35 mm
Natural rubber, NR
Recommended thickness of the material: ≥ 0.5 mm
· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Natural rubber, NR
Recommended thickness of the material: ≥ 0.22 mm
· **Eye protection:**

Tightly sealed goggles

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 4)

· **Body protection:**
Protective work clothing
Apron
· **Limitation and supervision of exposure into the environment**
In case of unintended release of the product: See section 6 of the Safety Data Sheet.

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Liquid
· **Color:**	Colorless
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **Melting point/Melting range:**	Undetermined.
· **Boiling point/Boiling range:**	100 °C (212 °F)
· **Flammability:**	Not applicable.
· **Explosion limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	Not applicable.
· **pH-value at 20 °C (68 °F):**	>11.4
· **Viscosity:**	
· **Kinematic:**	Not determined.
· **Dynamic:**	Not determined.
· **Solubility in / Miscibility with**	
· **Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Vapor pressure:**	Not determined.
· **Vapor pressure:**	
· **Density at 20 °C (68 °F):**	1.06136 g/cm³ (8.85705 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Particle characteristics**	Not applicable.

· **Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Solvent separation test**	
· **Water:**	94.1 %
· **Solids content:**	5.9 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

10 Stability and reactivity

· **Reactivity** See 10.3

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 5)

· ***Chemical stability***
· ***Thermal decomposition / conditions to be avoided:***
No decomposition if used and stored according to specifications.
· ***Possibility of hazardous reactions*** No dangerous reactions known.
· ***Conditions to avoid*** No further relevant information available.
· ***Incompatible materials:*** No further relevant information available.
· ***Hazardous decomposition products:*** No dangerous decomposition products known.

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11 Toxicological information

· ***Information on toxicological effects***
· ***Acute toxicity:*** Based on available data, the classification criteria are not met.
· ***Primary irritant effect:***
· ***on the skin:*** Strong caustic effect on skin and mucous membranes.
· ***on the eye:***
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
Causes serious eye damage.
· ***Sensitization:*** No sensitizing effects known.
· ***Additional toxicological information:***
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
· ***Interactive effects*** No interactive effects between components are known.

· ***Carcinogenic categories***

· ***IARC (International Agency for Research on Cancer)***
None of the ingredients is listed.

· ***NTP (National Toxicology Program)***
None of the ingredients is listed.

· ***OSHA-Ca (Occupational Safety & Health Administration)***
None of the ingredients is listed.

· ***Alternative sources for toxicological information***
No non-standard sources for toxicological information where used.

12 Ecological information

· ***Toxicity***
· ***Aquatic toxicity:*** No further relevant information available.
· ***Persistence and degradability*** No further relevant information available.
· ***Bioaccumulative potential*** No further relevant information available.
· ***Mobility in soil*** No further relevant information available.
· ***Results of PBT and vPvB assessment***
· ***PBT:*** Not applicable.
· ***vPvB:*** Not applicable.
· ***Other adverse effects***
· ***Remark:*** Local effects: may change the environmental pH endangering the aquatic life.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 6)

· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

13 Disposal considerations

· ***Waste treatment methods***
· ***Recommendation:***
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
· ***Uncleaned packagings:***
· ***Recommendation:***
Disposal must be made according to official regulations.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
· ***Recommended cleansing agent:*** *Water, if necessary with cleansing agents.*

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14 Transport information

· ***UN-Number***	
· ***DOT, IMDG, IATA***	*UN1814*
· ***UN proper shipping name***	
· ***DOT***	*Potassium hydroxide, solution*
· ***IMDG***	*POTASSIUM HYDROXIDE SOLUTION*
· ***IATA***	*Potassium hydroxide solution*
· ***Transport hazard class(es)***	
· ***DOT***	

· ***Class***	*8 Corrosive substances*
· ***Label***	*8*
· ***IMDG, IATA***	

· ***Class***	*8 Corrosive substances*
· ***Label***	*8*
· ***Packing group***	
· ***DOT, IMDG, IATA***	*II*

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 7)

· **Environmental hazards:**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations**	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Special precautions for user**	Warning: Corrosive substances
· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG18) Alkalis
· **Stowage Category**	A
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids
· **UN "Model Regulation":**	UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, II

15 Regulatory information

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

· **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

· **SARA Section 313 (specific toxic chemical listings)**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act)**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Prop 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 05/13/2025 Reviewed on 05/10/2025

Trade name: Potassium hydroxide 5-6%

(Contd. of page 8)

· **National regulations:**
· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations**
0.0 g/l
0.00 %
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Q.A / Normative
· **Date of previous version** 10/04/2022
· **Version number of previous version:** 4
· **Date of preparation** 05/13/2025
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
IMO : International Maritime Oragnization
Skin corrosion 1A: Skin corrosion/irritation – Category 1A
Eye damage 1: Serious eye damage/eye irritation – Category 1
· **Sources**
Globally Harmonized System, GHS
ADR/RID, IMDG, IATA
PubChem : an open chemistry database at the National Institutes of Health (NIH)
ECHA : European CHemicals Agency
· ***** Data compared to the previous version altered.** .