

Safety data sheet according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

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

- **1.1 Product identifier**
- **Trade name: Potassium hydroxide 0.1 mol / l**
- **Article number:** 1663
- **CAS Number:** 1310-58-3 (Potassium hydroxide)
- **Registration number** This product is a mixture. REACH registration numbers see section 3.
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Life cycle stages**
 - F Formulation or re-packing
 - IS Use at industrial Sites
- **Application of the substance / the mixture**
 - Laboratory chemicals
 - Reagent for analysis
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 - Th. Geyer GmbH & Co. KG
 - Dornierstr. 4 – 6
 - D-71272 Renningen

- Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417
- www.thgeyer.de
- sicherheitsdatenblaetter@thgeyer.de
- **Further information obtainable from:** Product management department
- **1.4 Emergency telephone number:**
 - National Poisons Information Service
 - (Birmingham Centre)
 - City Hospital
 - Dudley Road
 - Birmingham B18 7QH
 - Tel.:Emergency: (00 44) 87 06 00 62 66

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
 - The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 1)

Hazard pictograms



GHS07

Signal word Warning

Hazard-determining components of labelling:

potassium hydroxide

Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

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

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P337+P313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 1310-58-3	potassium hydroxide	≥0.5- <1%
EINECS: 215-181-3	Met. Corr. 1, H290; Skin Corr. 1A, H314	
Reg.nr.: 01-2119487136-33-XXXX	Acute Tox. 4, H302	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

First aider needs to protect himself.

Immediately remove any clothing soiled by the product.

After inhalation:

Remove person from danger area.

Supply fresh air.

Seek medical treatment in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Flush contaminated skin with soap and plenty of water.

After prolonged contact or any signs of skin changes (redness or other signs of inflammation) seek medical attention.

take care of a Possibility of inhalation at the same time

After eye contact:

Protect unharmed eye.

Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 2)

- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Seek medical treatment.
A person vomiting while laying on their back should be turned onto their side.
- **Information for doctor:** Please observe safety data sheet/label.
- **4.2 Most important symptoms and effects, both acute and delayed**
Gastric or intestinal disorders
Nausea
- **4.3 Indication of any immediate medical attention and special treatment needed**
Give Glucocorticoid-Aerosol in case of lung irritation.
Symptomatic treatment.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.
Particular danger of slipping on leaked/spilled product.
Avoid contact with eyes and skin.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Dilute with plenty of water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Dispose of the material collected according to regulations.
- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Apply the general protection and hygiene measures for the handling with chemicals.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** The product is not flammable.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 3)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 8 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

CAS: 1310-58-3 potassium hydroxide

WEL Short-term value: 2 mg/m ³

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- **Respiratory protection:**
Not necessary if room is well-ventilated.



Use suitable respiratory protective device in case of insufficient ventilation.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **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.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Safety glasses

Tightly sealed goggles

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 4)

· **Body protection:**

Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Colour:	Colourless
· Odour:	Odourless

· **pH-value at 20 °C:** >13· **Change in condition**

· Melting point/freezing point:	<0 °C
· Initial boiling point and boiling range:	>100 °C

· **Flash point:** Not applicable.· **Flammability (solid, gas):** Not applicable.· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Product does not present an explosion hazard.· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapour pressure:** Not determined.· **Density at 20 °C:** ~1 g/cm³
Not determined.· **Relative density** Not determined.· **Vapour density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**· **VOC (EC)** 0.00 %· **Solids content:** ~0.5 %· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.· **10.2 Chemical stability** Stable with proper storage and handling.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 5)

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Avoid contact with other chemicals.
- **10.6 Hazardous decomposition products:**
In case of fire / burns, development of hazardous combustion gases or vapors possible.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** Based on available data, the classification criteria are not met.
 - **LD/LC50 values relevant for classification:**
- | | | |
|---|------|-----------------|
| CAS: 1310-58-3 potassium hydroxide | | |
| Oral | LD50 | 273 mg/kg (rat) |
- **Primary irritant effect:**
 - **Skin corrosion/irritation**
Causes skin irritation.
 - **Serious eye damage/irritation**
Causes serious eye irritation.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **Subacute to chronic toxicity:** -
 - **Additional toxicological information:**
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Must not reach sewage water or drainage ditch undiluted or unneutralised.
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.
In generally not hazardous for water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
Observe local (country-specific) regulations and laws

(Contd. on page 7)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 6)

This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Chemicals must be disposed of in compliance with the respective national regulations.

· European waste catalogue

07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 07 00	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 01*	aqueous washing liquids and mother liquors

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA 	UN1814	
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA 	1814 POTASSIUM HYDROXIDE SOLUTION POTASSIUM HYDROXIDE SOLUTION	
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR 	<div style="text-align: center;"> </div> <ul style="list-style-type: none"> · Class · Label 	8 (C5) Corrosive substances. 8
<ul style="list-style-type: none"> · IMDG, IATA 	<div style="text-align: center;"> </div> <ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances. 8
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	III	
<ul style="list-style-type: none"> · 14.5 Environmental hazards: 	Not applicable.	
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Segregation Code 	Warning: Corrosive substances. 80 F-A,S-B Alkalis A SG35 Stow "separated from" SGG1-acids	
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.	

(Contd. on page 8)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 7)

· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, III

SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148

· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

· National regulations:

· Information about limitation of use:

Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.
Application, use and handling of our products take place out of our control and are solely your responsibility.

· Relevant phrases

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

· Department issuing SDS: Product management

· Contact: Product management

· 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)

(Contd. on page 9)

E

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 8)

IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

*** Data compared to the previous version altered.**

E

(Contd. on page 10)

Safety data sheet

according to 1907/2006/EC, Article 31

revised on: 07.09.2021

Version number 9

Creation Date: 19.01.2010

Trade name: Potassium hydroxide 0.1 mol / l

(Contd. of page 9)

Annex: Exposure scenario

- **Short title of the exposure scenario** Chemicals for Laboratory and industrial use
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** The substance is main component.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** No special measures required.
- **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
Do not breathe gas/vapour/aerosol.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures**
No special measures required.
Ensure that suitable extractors are available on processing machines
- **Personal protective measures**
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Water**
No special measures required.
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
- **Disposal measures** Ensure that waste is collected and contained.
- **Disposal procedures**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.