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

Printing date 19.01.2023 *Version number 1* *Revision: 19.01.2023*

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

· **Product identifier**

· **Trade name: Potassium hydroxide solution 42%**

· **Article number:** 883
· **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** chemical

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Möller Chemie GmbH & Co. KG
Bürgerkamp 1
D-48565 Steinfurt
Tel.: 02551/9340-0
Fax: 02551/9340-60

· **Further information obtainable from:** Product safety department
· **Emergency telephone number:**
Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

2 Hazards identification

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

GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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

GHS05 GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**
potassium hydroxide
· **Hazard statements**
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.

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P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***Other hazards***
The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.
· ***Results of PBT and vPvB assessment***
· ***PBT:***
The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).
· ***vPvB:***
The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

3 Composition/information on ingredients

· ***Mixtures***
· ***Description:*** *Mixture: consisting of the following components.*

· ***Dangerous components:***

CAS: 1310-58-3 *EINECS: 215-181-3* *Index number: 019-002-00-8*	*potassium hydroxide* *Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302* *Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 %* *Skin Corr. 1B; H314: 2 % ≤ C < 5 %* *Skin Irrit. 2; H315: 0.5 % ≤ C < 2 %* *Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %*	*42.0%*

· ***Additional information:***
For the wording of the listed hazard phrases refer to section 16.
Potassium Hydroxide CAS: 1310-58-3, EC: 215-181-3, Index: 019-002-00-8, Reach. Reg. No.: 01-2119487136-33

4 First aid measures

· ***Description of first aid measures***
· ***General information:***
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· ***After inhalation:*** *Supply fresh air, consult doctor in case of complaints.*
· ***After skin contact:***
Immediately wash with water and soap and rinse thoroughly.
Call a doctor immediately.
· ***After eye contact:***
Rinse opened eye for several minutes under running water. Then consult a doctor.
Call a doctor immediately.
· ***After swallowing:***
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.

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· **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.

5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** CO2, powder or water spray. Fight larger fire with alcohol resistant foam.
· **Special hazards arising from the substance or mixture**
Reacts in solution with aluminium, zinc, tin and alloys of these metals liberating hydrogen gas which forms an explosive mixture with air.
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
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, diatomaceous earth, acid binder, universal binder, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **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** When diluting always pour product into water and not vice versa.
· **Information about fire - and explosion protection:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Keep containers tightly closed in a dry place.
· **Information about storage in one common storage facility:**
Store away from oxidising agents.
Store away from acids.
· **Further information about storage conditions:**
Keep container tightly sealed.
Protect from frost.
recommended storage temperature: 15 - 40 °C
· **Storage class:** 8B
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

· ***Exposure controls***
· ***Appropriate engineering controls*** *No further data; see item 7.*
· ***Individual protection measures, such as personal protective equipment***
· ***General protective and hygienic measures:***
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Immediately remove all soiled and contaminated clothing
Avoid contact with the eyes and skin.
· ***Respiratory protection:*** *Not required.*
· ***Hand protection***

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· ***Material of gloves***
Butyl rubber, BR
Nitrile rubber, NBR
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/face protection***

Tightly sealed goggles

· ***Body protection:*** *Alkaline resistant protective clothing*

9 Physical and chemical properties

· ***Information on basic physical and chemical properties***	
· ***General Information***	
· ***Colour:***	*Colourless*
· ***Odour:***	*Odourless*
· ***Melting point/freezing point:***	*-2 °C*
· ***Boiling point or initial boiling point and boiling range***	*>100 °C*
· ***Flash point:***	*not applicable*
· ***pH at 20 °C***	*13 - 14*
· ***Solubility***	
· ***water:***	*Fully miscible.*
· ***Vapour pressure at 20 °C:***	*23 hPa*
· ***Density and/or relative density***	
· ***Density at 20 °C:***	*1.41 g/cm³*
· ***Other information***	
· ***Appearance:***	
· ***Form:***	*Fluid*

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· **Important information on protection of health and environment, and on safety.**	
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Solvent content:**	
· **Organic solvents:**	0.0 %
· **Water:**	58.0 %
· **VOC (EC)**	0,00 %

· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Void
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	
May be corrosive to metals.	
· **Desensitised explosives**	Void

10 Stability and reactivity

· **Reactivity** Substances or mixtures corrosive to metals.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions**
Reacts with light alloys to form hydrogen.
Strongly exothermic reaction with acids.
· **Conditions to avoid** May be corrosive to metals.
· **Incompatible materials:**
Acids.
Oxidizing agent
Light metals
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity**
Harmful if swallowed.
· **LD/LC50 values relevant for classification:**
1310-58-3 caustic potash in scales
LD50/oral: 333 mg/kg (rat)
· **Skin corrosion/irritation**
Causes severe skin burns and eye damage.

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· ***Serious eye damage/irritation***
Causes serious eye damage.
· ***Respiratory or skin sensitisation*** *Based on available data, the classification criteria are not met.*
· ***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.*
· ***Additional toxicological information:***
The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.
· ***Information on other hazards***

· ***Endocrine disrupting properties***
None of the ingredients is listed.

12 Ecological information

· ***Toxicity***
· ***Aquatic toxicity:*** *No further relevant information available.*
· ***Persistence and degradability***
Anorganic product, is not eliminable from water by means of biological cleaning processes.
· ***Bioaccumulative potential*** *No further relevant information available.*
· ***Mobility in soil*** *No further relevant information available.*
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).*
· ***vPvB:*** *This substance is not considered to be very persistent nor very bioaccumulative (vPvB).*
· ***Endocrine disrupting properties*** *For information on endocrine disrupting properties see section 11.*
· ***Other adverse effects***
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (German Regulation) (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 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.

13 Disposal considerations

· ***Waste treatment methods***
· ***Recommendation*** *Disposal according to local regulations.*

· ***Uncleaned packaging:***
· ***Recommendation:*** *Disposal must be made according to official regulations.*
· ***Recommended cleansing agents:*** *Water, if necessary together with cleansing agents.*

14 Transport information

· ***UN number or ID number***
· ***ADR, IMDG, IATA*** *UN1814*

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· ***UN proper shipping name***	
· ***ADR***	*1814 POTASSIUM HYDROXIDE SOLUTION*
· ***IMDG, IATA***	*POTASSIUM HYDROXIDE SOLUTION*
· ***Transport hazard class(es)***	
· ***ADR, IMDG, IATA***	
· ***Class***	*8 Corrosive substances.*
· ***Label***	*8*
· ***Packing group***	
· ***ADR, IMDG, IATA***	*II*
· ***Environmental hazards:***	
· ***Marine pollutant:***	*No*
· ***Special precautions for user***	*Warning: Corrosive substances.*
· ***Hazard identification number (Kemler code):***	*80*
· ***EMS Number:***	*F-A,S-B*
· ***Stowage Category***	*A*
· ***Segregation Code***	*SG35 Stow "separated from" SGG1-acids*
· ***Maritime transport in bulk according to IMO instruments***	*Not applicable.*
· ***Transport/Additional information:***	
· ***ADR***	
· ***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*
· ***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*
· ***UN "Model Regulation":***	*UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, II*

15 Regulatory information

· ***Directive 2004/42/EC***

· ***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*
· ***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.

· ***Relevant phrases***
H290 May be corrosive to metals.

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H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

· ***Department issuing SDS:*** *Product safety department*
· ***Contact:*** *Mrs. Steyer*
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
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
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
Eye Dam. 1: Serious eye damage/eye irritation – Category 1