

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product Form: Mixture
Product Name: Potassium Hydroxide Solution 50%
EC Index-No.: 019-002-00-8
EC-No.: 215-181-8
CAS-No.: 1310-58-3
REACH Registration No.: 01-2119487136-33
Synonyms: POTASH LYE

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

Relevant identified uses:

Use of the substance/mixture: Fertiliser ingredients. Electroplating/Photographic reagent. Battery electrolyte. Soap raw material. Reagent (Carbon Dioxide absorption process).

Uses advised against: No additional information available.

Company name: Nexchem Ltd
Unit 3 Barshaw Park
Leycroft Road
Leicester
LE4 1ET
Tel: 0116 2311130
24/7 Emergency Tel: 0800 246 1274
Email: sales@nexchem.co.uk

2. HAZARDS IDENTIFICATION

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
Corrosive to metals, Category 1. H290.

Full text of H- and EUH- Statements; See Section 16.

Adverse physicochemical, human health and environmental effects:

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

SAFETY DATA SHEET
Potassium Hydroxide 50%

Issued: 14/03/2023

Page 2

Label elements:

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

Hazard pictograms (CLP):



GHS05

GHS07

Signal word (CLP): Danger.

Hazard statements (CLP): H290 – May be corrosive to metals.
H302 – Harmful if swallowed.
H314 – Causes severe skin burns and eye damage.

Precautionary statements (CLP): P260 - Do not breathe vapours.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 or doctor.

Other hazards: Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances: Not applicable.

Mixtures:

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
POTASSIUM HYDROXIDE	CAS-No.: 1310-58-3 EC-No.: 215-181-3 EC Index-No.: 019-002-00-8	$\geq 50 - < 80$	Met. Corr. 1, H290 Acute Tox. 3 (Oral), H301 (ATE=100 mg/kg bodyweight) Skin Corr. 1A, H314

Full text of H- and EUH- Statements; See Section 16.

cont...]

4. FIRST AID MEASURES

Description of first aid measures:

First-aid measures general: Call a physician immediately.

First-aid measures after inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

First-aid measures after skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Call a physician immediately.

First-aid measures after ingestion: Rinse mouth out with water. Do not induce vomiting. If unconscious, place in the recovery position and seek medical advice. Call a physician immediately.

Most important symptoms and effects, both acute and delayed:

Symptoms/effects after inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Symptoms/effects after skin contact: May cause immediate skin irritation and blistering. Progressive ulceration will occur if treatment is not immediate.

Symptoms/effects after eye contact: Corneal burns may occur. Risk of serious damage to eyes.

Symptoms/effects after ingestion: Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Use water spray to cool containers. Use extinguishing media appropriate for surrounding fire.

Special hazards arising from the substance or mixture:

Hazardous decomposition products in case of fire: Toxic fumes may be released.

Advice for firefighters:

Protection during firefighting: Do not attempt to take action without suitable protection equipment. Self-contained breathing apparatus. Complete protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Emergency procedures: Turn leaking containers leak-side up to prevent the escape of liquid. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Keep upwind.

SAFETY DATA SHEET
Potassium Hydroxide 50%

Issued: 14/03/2023

Page 4

For emergency responders:

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to Section 8. "Exposure controls/personal protection".

Environmental precautions: Do not discharge into drains or rivers. Contain the spilled material by bunding.

Methods and material for containment and cleaning up:

Methods for cleaning up: Only qualified personnel equipped with suitable protective equipment may intervene. Absorb spilled material with sand or earth. Transfer the product into a spare container: Suitably labelled.

Other information: Dispose of materials or solid residues at an authorised site.

Reference to other sections: For further information refer to Section 13.
For further information refer to Section 8. "Exposure controls/personal protection".

7. HANDLING AND STORAGE

Precautions for safe handling:

Precautions for safe handling: Ensure good ventilation of the workstation. Avoid contact with skin and eyes. Avoid the formation of mists in the atmosphere.

Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities:

Storage conditions: Keep container tightly closed. Store in a well-ventilated place. Keep cool.

Packaging materials: Glass packaging. Polyethylene.

Specific end use(s): No additional information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

National occupational exposure and biological limit values: No additional information available.

Recommended monitoring procedures: No additional information available.

Air contaminants formed: No additional information available.

DNEL and PNEC:

POTASSIUM HYDROXIDE SOLUTION 50% (1310-58-3):

DNEL/DMEL (Workers):

Long-term – local effects, inhalation: 1 mg/m³

DNEL/DMEL (General population):

Long-term – local effects, inhalation: 1 mg/m³

Control banding: No additional information available.

[cont...]

SAFETY DATA SHEET

Potassium Hydroxide 50%

Issued: 14/03/2023

Page 5

Exposure controls:

Appropriate engineering controls: Ensure good ventilation of the workstation.

Personal protective equipment:

Personal protective equipment symbol(s):



Eye and face protection:

Eye protection: Tightly fitting safety goggles. Eye wash.

Skin protection:

Skin and body protection: Alkali resistant protective clothing.

Hand protection: Protective gloves made of PVC. Use rubber gloves. Neoprene gloves. Nitrile rubber gloves.

Respiratory protection: Respiratory protection device with a particle filter. Gas/vapour filter, type B; inorganic vapours excl. CO (EN141).

Thermal hazards: No additional information available.

Environmental exposure controls: Avoid release to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical state:	Liquid.	Viscosity, kinematic:	No data available.
Colour:	Colourless.	Viscosity, dynamic:	No data available.
Odour:	Odourless.	Explosive properties:	No data available.
Odour threshold:	No data available.	Oxidising properties:	No data available.
pH:	14.	Explosive limits:	No data available.
Relative evaporation rate (butyl acetate=1):	No data available.	Vapour pressure:	No data available.
Melting point:	6°C	Relative vapour density at 20°C:	No data available.
Freezing point:	No data available.	Relative density:	1.5
Boiling point:	145°C	Solubility:	Very soluble.
Flash point:	No data available.		
Auto-ignition temperature:	Not applicable.		
Decomposition temperature:	No data available.		
Flammability (solid, gas):	Not applicable.		
Partition coefficient n-octanol/water (Log Pow):	No data available.		

Other information: No additional information available.

[cont...]

10. STABILITY AND REACTIVITY

Reactivity:	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	No dangerous reactions known under normal conditions of use.
Conditions to avoid:	Heat.
Incompatible materials:	Metals. Strong acids. Strong oxidizing agents.
Hazardous decomposition products:	
On combustion releases:	Toxic fumes.

11. TOXICOLOGICAL INFORMATION**Information on toxicological effects:**

Acute toxicity (oral):	Harmful if swallowed.
Acute toxicity (dermal):	Not classified.
Acute toxicity (inhalation):	Not classified.

POTASSIUM HYDROXIDE SOLUTION 50% (1310-58-3):

LD50 oral rat:	333 – 388 mg/kg
-----------------------	-----------------

POTASSIUM HYDROXIDE (1310-58-3):

LD50 oral rat:	333 mg/kg
-----------------------	-----------

Skin corrosion/irritation:	Causes severe skin burns. pH: 14
Serious eye damage/irritation:	Assumed to cause serious eye damage. pH: 14
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.

12. ECOLOGICAL INFORMATION**Toxicity:**

Ecology – general:	Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute):	Not classified.
Hazardous to the aquatic environment, long-term (chronic):	Not classified.

SAFETY DATA SHEET
Potassium Hydroxide 50%

Issued: 14/03/2023

Page 7

POTASSIUM HYDROXIDE SOLUTION 50% (1310-58-3):

LC50 – Fish [1]: 50 – 165 mg/l

EC50 – Other aquatic organisms [1]: 30 – 1000 mg/l

POTASSIUM HYDROXIDE (1310-58-3):

LC50 - Fish [1] : 80 mg/l

Persistence and degradability: No additional information available.

Bioaccumulative potential: No additional information available.

Mobility in soil:

POTASSIUM HYDROXIDE SOLUTION 50% (1310-58-3):

Ecology – soil: Soluble in water. Absorbed only slowly into soil.

Results of PBT and vPvB assessment: No additional information available

Other adverse effects: No additional information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Land treatment (e.g., biodegradation of liquid or sludgy discards in soils, etc).

Product/Packaging disposal recommendations: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

14. TRANSPORT INFORMATION

In accordance with ADR / IMDG / IATA / ADN / RID:

ADR:

UN number: UN1814

UN proper shipping name: Potassium Hydroxide Solution

Transport document description: UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, II, (E)

Transport hazard class(es): 8



Packing group: II

Environmental hazards:

Dangerous for the environment: No.

No supplementary information available.

[cont...]

SAFETY DATA SHEET
Potassium Hydroxide 50%

Issued: 14/03/2023

Page 8

IMDG:

UN number: UN1814
UN proper shipping name: Potassium Hydroxide Solution
Transport document description: UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, II, (E)
Transport hazard class(es): 8



Packing group: II

Environmental hazards:

Dangerous for the environment: No.

Marine pollutant: No.

No supplementary information available.

IATA:

UN number: UN1814
UN proper shipping name: Potassium Hydroxide Solution
Transport document description: UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, II, (E)
Transport hazard class(es): 8



Packing group: II

Environmental hazards:

Dangerous for the environment: No.

No supplementary information available.

ADN:

UN number: UN1814
UN proper shipping name: Potassium Hydroxide Solution
Transport document description: UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, II, (E)
Transport hazard class(es): 8



Packing group: II

Environmental hazards:

Dangerous for the environment: No.

No supplementary information available.

[cont...]

SAFETY DATA SHEET
Potassium Hydroxide 50%

Issued: 14/03/2023

Page 9

RID:

UN number: UN1814

UN proper shipping name: Potassium Hydroxide Solution

Transport document description: UN1814, POTASSIUM HYDROXIDE SOLUTION, 8, II, (E)

Transport hazard class(es): 8



Packing group: II

Environmental hazards:

Dangerous for the environment: No.

No supplementary information available.

Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

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

EU-Regulations:

REACH Annex XVII (Restriction List): Contains no REACH substances with Annex XVII restrictions.

REACH Annex XIV (Authorisation List): Contains no REACH Annex XIV substances.

REACH Candidate List (SVHC): Contains no substance on the REACH candidate list.

PIC Regulation (Prior Informed Consent): Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants): Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants.

Ozone Regulation (1005/2009): Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148): Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 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 drug precursors)

National regulations: No additional information available.

Chemical safety assessment: No chemical safety assessment has been carried out for the substance or the mixture by the supplier.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions. [cont...]

16. OTHER INFORMATION

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
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.