



⊢⊑ Safety Data Sheet

According to SANS 10234:2008 and SANS 11014:2010

Issue date:13/02/2020 Revision date: 13/02/2025 : Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Trade name : POTASSIUM HYDROXIDE

Type of product : Hygroscopic substance. Preventive measures apply to the substance in dry state only

EC-No. : 215-181-3
EC Index-No. : 019-002-00-8
CAS-No. : 1310-58-3
UN-No. (ADR) : 1813
Product code : 116145xxx
Formula : KOH

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

Recommended uses and restrictions : For laboratory use only

1.3. Supplier's details

Labchem (Pty)Ltd 6 Wakefield Road Founders Hill

1609 Johannesburg - South Africa T +27 11 452 1116 - F +27 86 588 0293 techlab@labchem.co.za - www.labchem.co.za

1.4. Emergency telephone number

Emergency number : +27 11 452 1116

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral), Category 4 H302 Skin corrosion/irritation, Category 1 H314

Full text of H statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA)





GHS07

GHS05

Signal word (GHS-ZA) : Danger

Hazard statements (GHS-ZA) : H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS-ZA) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

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.

P321 - Specific treatment (see supplemental first aid instruction on this label).

P330 - Rinse mouth.

P363 - Wash contaminated clothing before reuse.

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Adverse physicochemical, human health and

environmental effects

: Harmful if swallowed, Causes severe skin burns and eye damage.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
potassium hydroxide (Main constituent)	(CAS-No.) 1310-58-3	≥ 85	Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314

Full text of H-statements: see section 16

3.2 Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a physician immediately.

First-aid measures after inhalation

Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Doctor: administration of corticoid spray.

First-aid measures after skin contact

: Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents without medical advice. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eve contact

Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Cover eyes aseptically. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion

Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not apply (chemical) neutralizing agents without medical advice. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.html). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation

: AFTER INHALATION OF DUST: Dry/sore throat. Corrosion of the upper respiratory tract. Respiratory difficulties. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible oedema of the upper respiratory tract. Possible inflammation of the respiratory tract. Possible laryngeal spasm/oedema. Risk of pneumonia.

Symptoms/effects after skin contact

: Caustic burns/corrosion of the skin. Slow-healing wounds. Burns.

Symptoms/effects after eye contact Symptoms/effects after ingestion

: Corrosion of the eye tissue. Permanent eye damage. Blindness. Serious damage to eyes.

Abdominal pain. Difficulty in swallowing. Possible esophageal perforation. Burns to the gastric/intestinal mucosa. Blood in vomit. AFTER INGESTION OF HIGH QUANTITIES: Change in the haemogramme/blood composition. Disturbances of heart rate. FOLLOWING SYMPTOMS MAY APPEAR LATER: Bleeding of the gastrointestinal tract. Low arterial

pressure. Blood in stool. Shock. Burns.

Chronic symptoms

: Dry skin. Skin rash/inflammation.

Potential adverse human health effects and symptoms

: Harmful if swallowed. Causes severe skin burns. Causes serious eye damage.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

: Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Fire hazard

: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard

: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

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Hazardous decomposition products in case of

: Toxic fumes may be released.

Advice for firefighters

Precautionary measures fire

: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions

: Cool tanks/drums with water spray/remove them into safety. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

Protection during firefighting

: Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Protective equipment

Gloves. Face shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen apparatus

Emergency procedures

Ventilate spillage area. Mark the danger area. No naked flames. Avoid ingress of water in the containers. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. 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

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers.

Methods and material for containment and cleaning up

For containment

: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Take account of toxic/corrosive precipitation water. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain.

Methods for cleaning up

Mechanically recover the product. Collect the spill only if it is in a dry state. Wetted substance: cover with dry sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Small quantities of liquid spill: neutralize with dilute acid solution. Wash away neutralized product with plentiful water. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Other information

Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling

Ensure good ventilation of the work station. Avoid raising dust. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Use corrosionproof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid contact of substance with water. Never dilute by pouring water to the product. Always add the product to the water. Keep container tightly closed. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.

Hygiene measures

Observe very strict hygiene - avoid contact. Safety showers and eye wash fountains should be readily available in handling and storage areas. 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

: Store locked up. Store in a well-ventilated place. Keep cool.

Storage area

Store in a dry area. Keep container in a well-ventilated place. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements.

Incompatible materials

: May be corrosive to metals. May be corrosive to metals.

Heat and ignition sources

: KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage

KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. highly flammable materials. metals. organic materials. water/moisture.

Special rules on packaging

SPECIAL REQUIREMENTS: hermetical. watertight. corrosion-proof. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials

SUITABLE MATERIAL: steel. stainless steel. carbon steel. iron. nickel. cardboard. synthetic material. polyethylene. glass. stoneware/porcelain. MATERIAL TO AVOID: lead. aluminium.

copper. tin. zinc. bronze.

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Storage temperature : 20 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

POTASSIUM HYDROXIDE (1310-58-3)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Potassium hydroxide
OEL STEL (mg/m³)	2 mg/m³
Regulatory reference	Government Notice. R: 1179

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: butyl rubber. natural rubber. neoprene. PVC. viton. GIVE GOOD RESISTANCE: chloroprene rubber. chlorosulfonated polyethylene. tetrafluoroethylene.

polyethylene/ethylenevinylalcohol. GIVE POOR RESISTANCE: leather. natural fibres. PVA

Hand protection : Gloves

Eye protection : Face shield. In case of dust production: protective goggles

Skin and body protection : Corrosion-proof clothing. In case of dust production: head/neck protection

Respiratory protection : Dust production: dust mask with filter type P3. Self-contained breathing apparatus if conc. in air

> 1 vol %

Personal protective equipment symbol(s):



Density









8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid Solid. Appearance Molecular mass 56.1 g/mol Colour : White. Odour : Odourless. Odour threshold : No data available рΗ 13.5 (0.56 %, 25 °C) pH solution No data available Relative evaporation rate (butylacetate=1) : No data available

Relative evaporation rate (ether=1) : Data not required

Melting point : 406 °C Freezing point : Not applicable : 1327 °C (1013 hPa) Boiling point Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : Not applicable Flammability (solid, gas) : Non flammable. : ≤ 0.01 hPa (520 °C) Vapour pressure Vapour pressure at 50 °C : No data available Relative vapour density at 20 °C : No data available Relative density : 2.04 (20 °C) Relative density of saturated gas/air mixture : No data available

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: 2044 kg/m³ (20 °C)

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Relative gas density : No data available

Solubility : Exothermically soluble in water. Soluble in ethanol. Soluble in glycerol.

Water: 121 g/100ml (25 °C)

Partition coefficient n-octanol/water (Log Pow) : No data available Partition coefficient n-octanol/water (Log Kow) : No data available Viscosity, kinematic : 0.538 mm²/s

Viscosity, dynamic : 1.1 mPa·s (25 °C, 10 %)

Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : Not applicable

Lower explosive limit (LEL) : No data available

Upper explosive limit (UEL) : No data available

9.2. Other information

VOC content : Not applicable (inorganic)

Other properties : Translucent. Hygroscopic. Basic reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

May be corrosive to metals. Absorbs the atmospheric CO2. Violent to explosive reaction with many compounds e.g.: with organic material, with (some) halogens and with (some) acids: heat release resulting in increased fire or explosion risk. Violent exothermic reaction with water (moisture). Reacts on exposure to water (moisture) with combustible materials: risk of spontaneous ignition.

10.2. Chemical stability

Hygroscopic. Absorbs the atmospheric CO2.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

POTASSILIM	HADBUXIDE	(1310-58-3)

LD50 oral rat 333 – 388 mg/kg bodyweight (Equivalent or similar to OECD 425, Rat, Male, Experimental value, Oral, 14 day(s))	ıl
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Skin corrosion/irritation : Causes severe skin burns.

pH: 13.5 (0.56 %, 25 °C)

Serious eye damage/irritation : Assumed to cause serious eye damage

pH: 13.5 (0.56 %, 25 °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

DOTAGGI	UM HYDROXIDE	(4240 59 3)

Viscosity, kinematic 0.538 mm²/s

Potential adverse human health effects and

symptoms

: Harmful if swallowed. Causes severe skin burns. Causes serious eye damage.

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SECTION 12: Ecological information

Toxicity

: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No Ecology - general 1272/2008. Before neutralisation, the product may represent a danger to aquatic organisms.

Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Ecology - air Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not

classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

: Groundwater pollutant. pH shift. Ecology - water

Hazardous to the aquatic environment, short-

term (acute)

Hazardous to the aquatic environment, long-

term (chronic)

: Not classified

: Not classified

Persistence and degradability 12.2.

POTASSIUM HYDROXIDE (1310-58-3)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. **Bioaccumulative potential**

POTASSIUM HYDROXIDE (1310-58-3)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

POTASSIUM HYDROXIDE (1310-58-3)	
Mobility in soil	No additional information available
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

: Not classified Ozone

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

Disposal methods

Waste treatment methods

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Product/Packaging disposal recommendations
- Do not discharge unmonitored into the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I). Immobilize the toxic or harmful components. Precipitate/make insoluble. Dilute. Neutralize.

Additional information Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA	
14.1. UN number			
1813	1813	1813	
14.2. Proper Shipping Name			
POTASSIUM HYDROXIDE, SOLID	POTASSIUM HYDROXIDE, SOLID	Potassium hydroxide, solid	
14.3. Transport hazard class(es)			
8	8	8	
8	8	8	
		Not applicable	
14.4. Packing group	14.4. Packing group		
II	II	II	
14.5. Environmental hazards	14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No	

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SANS	IMDG	IATA
	:	
No supplementary information available		

14.6. Special precautions for user

- SANS

Transport regulations (UN) : Subject to the provisions

Limited quantities (SANS) : 1 kg Limited quantities (SANS) : 1 kg : P002, IBC08

Packagings, large packagings and IBCs

Packing instructions (SANS)

Packagings, large packagings and IBCs Special : B2, B4

packing instructions (SANS)

Portable tank and bulk containers instructions

(SANS)

Portable tank and bulk container special

provisions (SANS)

: TP33

- IMDG

Transport regulations (IMDG) : Subject to the provisions

Limited quantities (IMDG) : 1 kg Excepted quantities (IMDG) : E2 Packing instructions (IMDG) : P002 IBC packing instructions (IMDG) : IBC08 IBC special provisions (IMDG) : B21, B4 Tank instructions (IMDG) : T3 Tank special provisions (IMDG) : TP33

: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE EmS-No. (Fire)

EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES

Stowage category (IMDG) : A

Properties and observations (IMDG) : 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.

- IATA

Transport regulations (IATA) : Subject to the provisions

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code 14.7.

Not applicable

SECTION 15: Regulatory information

Safety, health, and environmental national regulations specific for the product

SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS Regulatory reference 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National

Road Traffic Act 93 of 1996.

SECTION 16: Other information

Issue date 13/02/2020 : 13/02/2025 Revision date

Full text of H-statements:

t toxt of 11 statements.		
	H302	Harmful if swallowed.
	H314	Causes severe skin burns and eye damage.

SDS South Africa

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The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is ntended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.

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