

1. Product and Company Identification

Product Name Potassium Hydroxide 45% (Synonyms: Caustic potash, Potassium hydrate, Lye, Potassa, KOH)

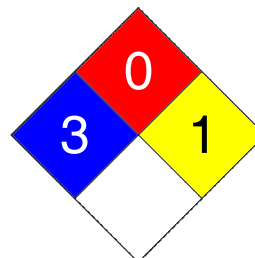
CAS # Mixture

Product Use Industrial applications

Distributor Benson Chemicals Ltd.
RR#1
Freelton
ON L0R1K0 CA
Phone: 1-800-265-0014
Emergency Services (24 hours / 7 days) 1-519-821-0215
Emergency Responder 1-800-567- 7455 Newalta Industrial SVC

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 3
Flammability	0
Physical Hazard	1
Personal Protection	X



2. Hazards Identification

Emergency Overview DANGER -- CORROSIVE
Toxic.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Eyes Causes chemical burns. May cause blindness.

Skin Causes chemical burns.

Inhalation May cause respiratory tract irritation.

Ingestion Harmful if swallowed. Causes chemical burns to mouth, throat and stomach.

Target organs Eyes. Respiratory system. Skin.

Chronic effects Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Signs and symptoms Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. The product causes burns of eyes, skin and mucous membranes.

3. Composition/Information on Ingredients

Ingredient(s)	CAS #	Percent
Potassium hydroxide	1310-58-3	30 - 60

4. First Aid Measures

First aid procedures

Eye contact Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

Skin contact Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical attention if irritation persists.

Inhalation If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.

Ingestion Do not induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

Notes to physician

Symptoms may be delayed.

General advice

Avoid contact with eyes and skin. Keep out of reach of children. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting Measures

Flammable properties	Not flammable by WHMIS criteria. Not flammable, but reacts with most metals to form flammable hydrogen gas.
Extinguishing media	
Suitable extinguishing media	Alcohol foam. Polymer foam.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	Irritating and toxic gases or fumes may be released during a fire.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Should not be released into the environment. Never return spills in original containers for re-use.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
Storage	Keep out of the reach of children. Store in a closed container away from incompatible materials. Keep containers tightly closed in a cool, well-ventilated place.

8. Exposure Controls / Personal Protection

Exposure limit values

Ingredient(s)	Exposure limit values
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Potassium hydroxide	ACGIH-TLV Ceiling: 2 mg/m ³
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Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
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Personal protective equipment

Eye/Face protection	Wear chemical goggles.
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Hand protection	Rubber gloves. Confirm with a reputable supplier first.
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Skin and body protection	Use of an impervious apron is recommended.
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Respiratory protection	If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.
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General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.
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9. Physical & Chemical Properties

Appearance	Liquid
Colour	Gray/ white
Form	Liquid
Odour	Odourless
Odour threshold	Not available
Physical state	Liquid
pH	13, conc: 1% (solution)
Melting point	360 °C (680.00 °F)
Freezing point	Not available
Boiling point	132.2 °C (269.96 °F)
Flash point	Not applicable
Evaporation Rate	0
Flammability limits in air, lower, % by volume	Not applicable
Flammability Limits in Air, Upper, % by Volume	Not applicable
Vapour pressure	5.2 kPa (39 mmHg) @60°C
Vapour density	Not available
Specific gravity	1.46 (H2O = 1)
Relative density	2.1 g/cm3
Octanol/water coefficient	0.65; 0.83
Solubility (H2O)	Complete
Auto-ignition temperature	Not applicable
VOC (Weight %)	-55
Percent volatile	0 % (v/v)
Molecular weight	56.10 g/mol
Molecular formula	KOH

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Acids. Metals.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Potassium hydroxide	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Potassium hydroxide	214 mg/kg rat

Effects of acute exposure

Eye	Causes chemical burns. May cause blindness.
Skin	Causes chemical burns.
Inhalation	May cause respiratory tract irritation.
Ingestion	Harmful if swallowed. Causes chemical burns to mouth, throat and stomach.
Sensitisation	Non-hazardous by WHMIS criteria.
Local effects	Toxic if swallowed.

Chronic effects	Non-hazardous by WHMIS criteria.
Carcinogenicity	Non-hazardous by WHMIS criteria.
Mutagenicity	Non-hazardous by WHMIS criteria.
Reproductive effects	Non-hazardous by WHMIS criteria.
Teratogenicity	Non-hazardous by WHMIS criteria.

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Environmental effects	Harmful to aquatic life.
Aquatic toxicity	Not available
Persistence and degradability	Not available
Bioaccumulation/accumulation	Not available
Partition coefficient	0.65; 0.83
Mobility in environmental media	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Waste must be disposed of in accordance with federal, state/provincial and local environmental control regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	POTASSIUM HYDROXIDE, SOLUTION
Hazard class	8
UN number	1814
Packing group	II



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Potassium hydroxide 1310-58-3 1 %

WHMIS classification Class D - Division 1B, Class E - Corrosive Material

WHMIS status Controlled

WHMIS labeling



Inventory Status

Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Prepared by

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