
1. Product and Company Identification

Product Name Potassium Hydroxide 45%
Synonym(s) KOH, Potassa, Lye, Potassium hydrate, Caustic potash
CAS # Mixture
Product Use Industrial applications
Supplier information PVS Benson
1012 Gore Road
Freelton, ON L0R1K0 CA
Phone: 1-800-265-0014
Emergency Services (24 hours / 7 days): 1-519-821-0215

2. Hazards Identification

Emergency overview DANGER -- CORROSIVE
CAUSES SKIN AND EYE BURNS. 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 or chemical burns.

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

Target organs Eyes. Respiratory system. Skin.

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

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

Potential environmental effects See section 12.

3. Composition/Information on ingredients

Components	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. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Notes to physician Symptoms may be delayed.

General advice 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. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire-fighting Measures

Flammable properties 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	Firefighters should wear a self-contained breathing apparatus.
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.
Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas.
Methods for containment	Stop leak if you can do so without risk.
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	Ensure adequate ventilation. Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing. Keep container tightly closed. Avoid breathing vapours or mists of this product. Wash thoroughly after handling.
Storage	Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place.

8. Exposure controls/Personal protection

Occupational exposure limits		
US. ACGIH Threshold Limit Values		
Components	Type	Value
Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m3
Exposure limits	See above	
Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.	
Personal protective equipment		
Eye/Face protection	Wear chemical goggles.	
Hand protection	Rubber gloves. Confirm with a reputable supplier first.	
Skin and body protection	Use of an impervious apron is recommended.	
Respiratory protection	If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).	
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.	

9. Physical and chemical properties

Appearance	Liquid
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Colour	Gray/ white
Form	Liquid
Odour	Odourless
Odour threshold	Not available.
Physical state	Liquid.
pH	13, conc: 1% solution
Freezing point	Not available.
Boiling point	132.2 °C (269.96 °F)
Pour point	Not available.
Evaporation Rate	0
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Flammability limits in air, lower, % by volume	Not applicable
Vapour pressure	5.2 kPa (39 mmHg) @60°C
Vapour density	Not available.
Specific gravity	1.46 (H ₂ O = 1)
Partition coefficient (n-octanol/water)	0.65; 0.83
Solubility (Water)	Complete
Relative density	2.1 g/cm ³
Viscosity	Not available.
VOC	-55 %
Percent volatile	0 % (v/v)

10. Stability and reactivity

Reactivity	Reacts vigorously with acids. Corrosive to metals.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.
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.

11. Toxicological information

Toxicological data

Components	Species	Test results
Potassium hydroxide (CAS 1310-58-3)		
Acute		
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	214 mg/kg

Effects of acute exposure

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

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.
Name of Toxicologically Synergistic Products	Not available.

12. Ecological information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicological data

Components	Species	Test results
Potassium hydroxide (CAS 1310-58-3)		
Aquatic		
Fish	LC50 Western mosquitofish (<i>Gambusia affinis</i>)	80 mg/L, 96 hours

Persistence and degradability Not available.

Bioaccumulation/accumulation Not available

Mobility in environmental media Not available.

Environmental effects Harmful to aquatic life.

Aquatic toxicity Not available.

Partition coefficient Not available.

Chemical fate information Not available.

13. Disposal considerations

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:

UN number	UN1814
Proper shipping name	POTASSIUM HYDROXIDE, SOLUTION
Hazard class	8
Packing group	II

TDG



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: Threshold limits

Potassium hydroxide (CAS 1310-58-3)	1 %
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WHMIS status Controlled
WHMIS classification Class D - Division 1B, Class E - Corrosive Material
WHMIS labeling



Inventory Status

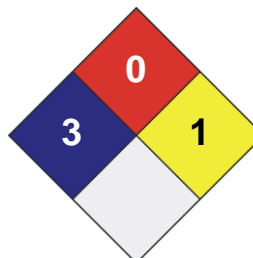
Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

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

16. Other information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	X



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.

Issue date 09-September-2014
Effective date 15-November-2014
Expiry date 15-November-2017
Prepared by Dell Tech Laboratories Ltd. Phone: (519) 858-5021
Other information This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.