

Potassium Hydroxide

SECTION 1. IDENTIFICATION

Product Identifier	Potassium Hydroxide (Solid)
Other Means of Identification	Caustic potash solid, Potash lye
Product Code(s)	PO4510, PO4520, PO4760
Product Family	Inorganic Solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	2 Bram Court, Unit#3 Brampton, Ontario, L6W 3R6 Canada 905-455-4444
Emergency Phone No.	CANUTECH CANADA, 613-996-6666, 24 Hours
SDS No.	0325

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Skin corrosion - Category 1A; Serious eye damage - Category 1

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Toxic if swallowed.
Causes severe skin burns and eye damage.

Precautionary Statement(s):

Keep only in original container.
Wash hands and skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe dusts or mists.
Wear protective gloves/protective clothing/eye protection/face protection.
Absorb spillage to prevent material damage.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

IF ON SKIN: Wash with plenty of water.
Immediately call a POISON CENTRE or doctor.
Store locked up.
Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Potassium hydroxide	1310-58-3	> 90	Caustic potash solid, Potash lye

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a Poison Centre or doctor.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Immediately rinse skin with lukewarm, gently flowing water for at least 60 minutes. DO NOT INTERRUPT FLUSHING. If it can be done safely, continue flushing during transport to hospital.

Eye Contact

Quickly and gently blot or brush chemical off the face. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 60 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a Poison Centre or doctor.

Ingestion

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Rinse mouth with water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Specific treatment is required.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

DO NOT use carbon dioxide, or other agents that smother the flames.

Specific Hazards Arising from the Product

Closed containers may rupture violently when heated releasing contents. When moist, potassium hydroxide can react with metals, such as aluminum, tin and zinc, to form flammable and explosive hydrogen gas.

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In a fire, the following hazardous materials may be generated: flammable hydrogen. Potassium Oxide.

Special Protective Equipment and Precautions for Fire-fighters

Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

Large spills or leaks: contain spill with earth, sand, or absorbent material which does not react with spilled material. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating vapours or mists. Avoid generating dusts. Only use where there is adequate ventilation. Prevent accidental contact with incompatible chemicals. Never return unused or contaminated product to its original container. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. Keep amount in storage to a minimum. Store in a closed container. Separate from incompatible materials (see Section 10: Stability and Reactivity). Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Potassium hydroxide				2 mg/m3		

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: butyl rubber, natural rubber, neoprene rubber, nitrile rubber, polyvinyl chloride, Viton®, Viton®/butyl rubber, Barrier® (PE/PA/PE), Tychem® BR/LV, Tychem® Responder, Tychem® TK.

The following materials should NOT be used: polyvinyl alcohol.

Respiratory Protection

No specific guidelines are available. Contact chemical manufacturer/supplier for advice. The NIOSH respiratory protection recommendations for sodium hydroxide may be applicable.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White - yellow flakes. Absorbs moisture from the air.
Odour	Odourless
Odour Threshold	Not available
pH	13.5 (0.1 M solution)
Melting Point/Freezing Point	380 °C (716 °F) (melting); 380 °C (716 °F) (freezing)
Initial Boiling Point/Range	1320 °C (2408 °F)
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	~ 0 kPa (0 mm Hg)
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	2.04 at 20 °C
Solubility	Very soluble in water; Soluble in all proportions in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not applicable (kinematic); Not applicable (dynamic)
Other Information	
Physical State	Solid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable if kept dry.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Water, moisture or humidity.

Incompatible Materials

Metals (e.g. aluminum), water, organic acids (e.g. acetic acid), acid anhydrides (e.g. acetic anhydride). Organic compounds.

Hazardous Decomposition Products

Potassium oxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

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Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Potassium hydroxide	Not available	273 mg/kg (rat)	> 1260 mg/kg (rabbit)

Skin Corrosion/Irritation

Contact can cause pain, redness, burns, and blistering. Permanent scarring can result.

Serious Eye Damage/Irritation

Contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause severe lung injury. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Symptoms may develop hours after exposure and are made worse by physical effort.

Ingestion

Toxic, can cause death Causes severe irritation or burns to the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea. Causes damage to organs.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Causes dermatitis.

Respiratory and/or Skin Sensitization

No information was located for respiratory sensitization. Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Potassium hydroxide	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1813	Potassium hydroxide, solid or flake	8 ; 9.2	II
US DOT	UN1813	Potassium hydroxide, solid or flake	8	II

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

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