SAFETY DATA SHEET

SECTION 01 - IDENTIFICATION

Product Identifier	POTASSIUM HYDROXIDE
Other identification (Chemical name, Commercial name, Synonymous)	POTASSIUM HYDROXIDE, HYDRATE DE POTASSIUM, POTASSE CAUSTIQUE, LYE
Product code	PR-0066; PT-0066; PR-9966
Chemical formula	KOH
Molar weight	56.11
Recommended use and Restrictions on use	For laboratory, school, commercial or industrial use. Not for medical or household use. Do not use for medical, food or household purposes.
Supplier	LABORATOIRE MAT 610, rue Adanac Québec Québec G1C 7B7 418-660-8666 Mon-Fri 8h-16h www.labmat.com labmat@labmat.com
Emergency phone	418-660-8666 Mon-Fri 8h-16h CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS	2025-07-04

SECTION 02 - HAZARDS IDENTIFICATION

WHIMS CANADA

- Skin corrosion/irritation - Skin corrosion - category 1A
- Serious eye damage/eye irritation - Eye irritation - category 1
- Corrosive to metals - category 1
- Acute toxicity - Oral - category 4

PICTOGRAMS

Signal Word

DANGER

Hazards statements (H)

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

Precautionary statements (P)

- Do not breathe mists, gases, vapors and other fumes, or the product itself.
- Wear protective gloves (nitrile, butyl, neoprene), protective clothing and eye and face protection.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse with water.
- IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- Immediately call a POISON CENTER or a physician.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Store locked up.
- Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
- Keep only in original container.
- Absorb spillage to prevent material damage.
- Store in a corrosion resistant container or a container with corrosion resistant liner.
- IF SWALLOWED: Call a POISON CENTER or a physician if you feel unwell.
- Rinse mouth.

Other dangers

NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)

Health	3
Fire	0
Reactivity	1
Special danger	

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Component	No. CAS	% Weight
Potassium hydroxide	1310-58-3	>=85%

SECTION 04 - FIRST AID MEASURE

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing. If irritation persists, seek medical attention.
Inhalation	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	If the person is conscious, give water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	The product is a corrosive material. Main symptoms of high exposure: Chemical burns of the skin, eyes and respiratory and digestive mucous membranes. Skin, eye and respiratory system irritation. The corrosive effect will outweigh the toxicity for the concentrated product. Ref. section 11.
Immediate medical attention and special treatment, if necessary	Treat according to symptoms. Show this sheet to the attending physician.

SECTION 05 - FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Not applicable.
Combustion products	Hazardous combustion products formed under fire conditions: Potassium oxides.
Specific hazards of the dangerous product	May react violently with incompatible products (Ref Section 10).
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency measures	Evacuate personnel to safe areas. When handling, wear appropriate safety equipment (reference Section 8 for protective equipment to be used). Ensure a good ventilation. Use NIOSH cartridge respiratory protection if necessary or for larger spills. Avoid dust formation. Avoid breathing dust.
Methods and materials for containment and cleaning up	Neutralize residues with dilute acid, then rinse with water. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Do NOT use absorbents composed with minerals, clay, or cellulose.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Deliquescent (strongly hygroscopic). Store in a cool, dry, and well-ventilated place. Keep container tightly closed and store away from heat, moisture, and incompatible products (ref. section 10).
Methods of handling	This product is corrosive to metals. Do not bottle in a metal container. Avoid contact withh eyes, skin and clothing. Avoid ingestion and inhalation. Wear personal protective equipment (ref. section 8) when handling. Always ensure good ventilation. Apply the usual standard hygiene rules: Wash your hands after use. Do not eat or drink during use.

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

WORKPLACE CONTROL PARAMETERS

Components	CAS-No.	Control parameters	Value	Basis
Potassium hydroxide	1310-58-3	C	2.000000 mg/m3	Canada. British Columbia OEL
		CEV	2.000000 mg/m3	Canada. Ontario OELs
		(c)	2.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		C	2.000000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	A substance which may not be recirculated in accordance with section 108			
	A substance which may not be recirculated in accordance with section 108			
		C	2.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		C	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Data origin	Sigma-Aldrich (Millipore Sigma)
Respiratory	If work under the hood is not possible, or if the permissible levels are exceeded, use NIOSH cartridge respiratory protection, or an air-supplied respirator.
Gloves	Gloves resistant to acidic corrosive materials. Suggested material: Nitrile. Neoprene. Butyl. The type, thickness and length of the glove must be chosen according to the use, the concentration of the product, as well as the duration of use. Replace gloves regularly for better protection.
Eyes	Safety goggles with safety shutters.
Shoes	Use safety shoes.
Clothes	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Use fan. Recirculation is prohibited. Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Color	White
Odour	Data not available
Odour threshold	Data not available
Melting point and freezing point	361 °C
Boiling point	1320°C
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Flash point	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
pH	Solution 0.02% = pH 11.5
Kinematic viscosity	Not applicable
Solubility	Very soluble in water (112g @ 20 °C). Soluble in alcohol.
Partition coefficient water/n-octanol	Data not available
Vapour pressure	1.0 mmHg @ 719°C
Relative density	2.04 g/cm³ @ 20 °C
Vapour density	Data not available
Particle characteristics	Deliquescent pellets

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Basic product, reacts violently with strong acids.
Chemical stability	Hygroscopic. Stable under recommended storage conditions.
Possibility of hazardous reactions	May react violently with incompatible substances.
Conditions to avoid	Avoid moisture. Avoid contact with incompatible materials. Exposure to air.
Incompatible materials	Strong acids. Strong oxidizers. Acid chlorides. Acid anhydrides. Acrylonitrile. Acrolein. Alcohols. Aluminum. Copper. Stain. Magnesium. Halogenated organics. Organo-nitro compounds. Organic materials. Lead.
Hazardous decomposition products	Potassium oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

POTASSIUM HYDROXIDE

Routes of exposure	Ingestion, inhalation, skin and eye contact.
Acute exposition effects / symptoms:	By exposure route below. The corrosive effect will outweigh the toxicity for the concentrated product.
- Eyes	Causes serious eye damage.
- Skin	Severe burns and tissue ulcerations.
- Inhalation	Irritation and inflammation of the nose, throat and lungs. Spasms. Edema of the larynx and bronchi. Chemical pneumonitis. Pulmonary edema. Can lead to death.
Acute toxicity (Ingestion)	Burning of the mouth, throat, esophagus and abdominal wall. Dysphagia. Abdominal pain. Cramps. Diarrhea. Melena. Possible perforation of the esophagus and stomach. Bloody vomiting Tremors. Convulsions. Circulatory collapse. Stupor. Loss of consciousness. Coma. Possible death.
Chronic exposure effects / symptoms	Burning sensation. Dermatitis. Conjunctivitis. Lung damage. Nervous disorders. Chest pain. Cough. Dyspnoea. Laryngitis. Headache. Dizziness. Confusion. Irritability. Sweating. Salivation. Tearing. Fatigue. Alopecia. Weight loss. Loss of appetite. Nausea and vomiting. Convulsions. Target organs: Skin. Eyes. Respiratory system.
DL50 (specify species and route of entry)	LD50 Oral - 273 mg/kg. LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 Inhalation - Data not available.

SECTION 12 - ECOLOGICAL INFORMATION

POTASSIUM HYDROXIDE

Ecotoxicity	Toxicity to fish: LC50 - Gambusia affinis (Mosquito fish) - 80 mg/L - 96 h.
Persistence and degradability	Not applicable for inorganic substances.
Bioaccumulative potential	Data not available.
Mobility in soil	Probable mobility in the environment due to its solubility in water.
Other adverse effects	Harmful to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of contents and container in accordance with local, regional and national regulations, or contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	1813
UN Proper shipping name	HYDROXYDE DE POTASSIUM SOLIDE
Transport hazard class(es)	Matières corrosives 8
Packing group	II
Limited quantity index	1 kg
ERAP Index	-
Special precautions	-

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA

- Skin corrosion/irritation - Skin corrosion - category 1A
- Serious eye damage/eye irritation - Eye irritation - category 1
- Corrosive to metals - category 1
- Acute toxicity - Oral - category 4

SECTION 16 - OTHER INFORMATION

CNESST: Commission des normes, de l'équité et de la santé et sécurité au travail
NIH: National institute of health (U.S. Naltional Library of Medecine)
ECHA: Agence Européenne de Chimie
ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
VECD: Valeur d'exposition courte durée
VEMP: Valeur d'exposition moyenne pondérée
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TLV : Threshold limit value
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
RSST: Règlement sur la santé et sécurité au travail (Québec)
INRS: l'Institut national de recherche et de sécurité pour la prévention des accidents du travail et des maladies professionnelles (France)

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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