

SAFETY DATA SHEET

Creation Date 02-November-2009

Revision Date 18-December-2025

Revision Number 10

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

1. Identification

Product Name	Potassium Hydroxide
Cat No. :	P246-3; P250-1; P250-3; P250-10; P250-50; P250-500; P251-3; P251-50; P251-500; P258-12; P258-50; P258-50LC; P258-212; XXP25812KG; XXP25850KG; NC1429443; NC1416131; NC1617169
Synonyms	Potassium hydrate; Lye; Caustic potash
Recommended Use	Laboratory chemicals.
Uses advised against	Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Importer/Distributor

Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

Corrosive to metals	Category 1
Acute oral toxicity	Category 4
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

Label Elements

Signal Word

Danger

Hazard Statements

May be corrosive to metals
Harmful if swallowed
Causes severe skin burns and eye damage
May cause respiratory irritation



Precautionary Statements

Prevention

Keep only in original packaging
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER/doctor
Rinse mouth
Do NOT induce vomiting
Wash contaminated clothing before reuse

Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed
Store in corrosive resistant polypropylene container with a resistant inliner

Disposal

Dispose of contents/container to an approved waste disposal plant

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Potassium hydroxide	1310-58-3	100.0

4. First-aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison

control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Ingestion Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

Most important symptoms/effects Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media Carbon dioxide (CO₂)

Flash Point Not applicable
Method - No information available

Autoignition Temperature No information available

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes.

Hazardous Combustion Products

Potassium oxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
3

Flammability
0

Instability
1

Physical hazards
N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

Environmental Precautions Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Air sensitive. Corrosives area. Incompatible Materials. Water. Metals. Acids.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec
Potassium hydroxide	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	CEV: 2 mg/m ³	Ceiling: 2 mg/m ³

Component	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Potassium hydroxide	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Component	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Potassium hydroxide	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Component	ACGIH TLV	OSHA PEL	NIOSH
Potassium hydroxide 1310-58-3 (100.0)	Ceiling: 2 mg/m ³	(Vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye Protection

Goggles

Hand Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Glove material	Breakthrough time	Glove thickness	Glove comments
Neoprene	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

No protective equipment is needed under normal use conditions.

Recommended Filter type: Particulates filter conforming to EN 143

Environmental exposure controls

Prevent product from entering drains.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

9. Physical and chemical properties

<u>Appearance</u>			
Physical State		Solid	
Color		Light yellow	
Odor		Odorless	
Odor Threshold		No information available	
<u>Property</u>	<u>Values</u>		<u>Remarks</u> <u>• Method</u>
Melting Point/Range		360 °C / 680 °F	
Softening Point		No data available	
Boiling Point/Range		1320 °C / 2408 °F	
Flash Point		Not applicable	Method - No information available
Flammability (liquid)		Not applicable	Solid
Flammability (solid,gas)		No information available	
Explosion Limits		No data available	
Autoignition Temperature		No data available	
Decomposition Temperature		No data available	
pH		13.5	(0.1M)
Viscosity		Not applicable	Solid
Water Solubility		Soluble in water	
Solubility in other solvents		No information available	
Partition Coefficient (n-octanol/water)			
Component	log Pow		
Potassium hydroxide		0.83	
Vapor Pressure		No information available	
Density / Specific Gravity		2.04	
Bulk Density		No data available	
Vapor Density		Not applicable	Solid
Particle characteristics		No data available	
<u>Other Information</u>			
Molecular Formula		KOH	
Molecular Weight		56.1	
Evaporation Rate		Not applicable - Solid	

10. Stability and reactivity

Reactive Hazard	Yes
Stability	Moisture sensitive. Air sensitive.
Conditions to Avoid	Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water.
Incompatible Materials	Water, Metals, Acids
Hazardous Decomposition Products	Potassium oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation	Causes severe burns. May be harmful if inhaled.
Ingestion	Harmful if swallowed. Causes severe burns.
Eyes	Causes severe burns. May cause blindness or permanent eye damage.
Skin	Causes severe burns. May be harmful in contact with skin. Repeated exposure may cause

skin dryness or cracking.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	LD50 = 333-384 mg/kg (Rat)	-	-

Toxicologically Synergistic Products No information available

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory

Based on available data, the classification criteria are not met

Skin

Based on available data, the classification criteria are not met

(e) germ cell mutagenicity;

Based on available data, the classification criteria are not met

(f) carcinogenicity;

Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Potassium hydroxide	1310-58-3	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs

None known.

(j) aspiration hazard;

Not applicable
Solid

Symptoms / effects, both acute and delayed

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Other Adverse Effects

The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties

This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Potassium hydroxide	Not listed	LC50 = 50-165 mg/L (96h)	Not listed	Not listed

Persistence and Degradability	Persistence is unlikely
Bioaccumulation/ Accumulation	No information available.
Mobility	. Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Potassium hydroxide	0.83

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No	UN1813
Proper Shipping Name	Potassium hydroxide, solid
Hazard Class	8
Packing Group	II

TDG

UN-No	UN1813
Proper Shipping Name	POTASSIUM HYDROXIDE, SOLID
Hazard Class	8
Packing Group	II

IATA

UN-No	UN1813
Proper Shipping Name	POTASSIUM HYDROXIDE, SOLID
Hazard Class	8
Packing Group	II

IMDG/IMO

UN-No	UN1813
Proper Shipping Name	POTASSIUM HYDROXIDE, SOLID
Hazard Class	8
Packing Group	II

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Potassium hydroxide	1310-58-3	X	-	X	ACTIVE	215-181-3	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Potassium hydroxide	1310-58-3	X	KE-29139	X	X	X	X	X	X

Legend:

X - Listed '-' - Not listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

Other International Regulations

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Potassium hydroxide	-	Use restricted. See entry 75. (see link for restriction details)	-

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Potassium hydroxide	1310-58-3	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Potassium hydroxide	1310-58-3	Not applicable	Not applicable	Not applicable	Annex I - Y35

16. Other information

Prepared By	Product stewardship (Regulatory Affairs) Thermo Fisher Scientific email - bege1.sdsdesk@thermofisher.com
Creation Date	02-November-2009
Revision Date	18-December-2025
Print Date	18-December-2025
Revision Summary	This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

Disclaimer

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End of SDS