

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

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

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

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

Rinse mouth
Do NOT induce vomiting

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

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

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

4. First-aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation

Move to fresh air. 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. Immediate medical attention is required. If not breathing, give artificial respiration.

Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Most important symptoms and 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 (CO ₂)
Flash Point	Not applicable
Method -	No information available
Autoignition Temperature	
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

Thermal decomposition can lead to release of irritating gases and vapors. Contact with metals may evolve flammable hydrogen gas. Water reactive.

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.

NFPA

Health 3	Flammability 0	Instability 1	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system.
Methods for Containment and Clean Up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling	Use only under a chemical fume hood. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Corrosives area.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Potassium hydroxide	Ceiling: 2 mg/m ³	(Vacated) Ceiling: 2 mg/m ³	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 IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures None under normal use conditions.

Personal Protective Equipment

Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	No protective equipment is needed under normal use conditions.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Light yellow
Odor	Odorless
Odor Threshold	No information available
pH	13.5 (0.1M)
Melting Point/Range	360 °C / 680 °F
Boiling Point/Range	1320 °C / 2408 °F
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	2.04
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	KOH
Molecular Weight	56.1

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

Acute Toxicity

Product Information
Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	LD50 = 284 mg/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Causes severe burns by all exposure routes

Sensitization No information available

Carcinogenicity 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

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system
STOT - repeated exposure None known

Aspiration hazard No information available

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

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Potassium hydroxide	Not listed	LC50: = 80 mg/L, 96h static (Gambusia affinis)	Not listed	Not listed

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

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

United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Potassium hydroxide	1310-58-3	X	ACTIVE	-

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Potassium hydroxide	1310-58-3	X	-	215-181-3	X	X	X	X	KE-29139

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Potassium hydroxide	X	1000 lb	-	-

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Potassium hydroxide	1000 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Potassium hydroxide	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

End of MSDS