



Safety Data Sheet

Potassium Hydroxide 45%

SECTION 1: Identification

1.1 GHS Product identifier

Product name Potassium Hydroxide 45%

1.2 Other means of identification

Potassium hydrate; Lye; Caustic potash

1.3 Recommended use of the chemical and restrictions on use

For laboratory and manufacturing use only.

1.4 Supplier's details

Name High Purity Products
Address 14546 N. Lombard Street
Portland OR 97203
United States of America

Telephone 503-227-1616
email help.desk@highpp.com

1.5 Emergency phone number

CHEMTREC: 1-800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Corrosive to metals, Cat. 1
- Acute toxicity, oral, Cat. 4
- Eye damage/irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1A

2.2 GHS label elements, including precautionary statements

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Pictogram



Signal word

Danger

Hazard statement(s)

H290

May be corrosive to metals

H302

Harmful if swallowed

H314

Causes severe skin burns and eye damage

H318

Causes serious eye damage

Precautionary statement(s)

P260

Do not breathe vapors.

P264

Wash hands thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312

IF SWALLOWED: Call a doctor if you feel unwell.

P301+P330+P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353

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

P304+P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338

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

P310

Immediately call a POISON CENTER.

P363

Wash contaminated clothing before reuse.

P390

Absorb spillage to prevent material-damage.

P405

Store locked up.

SECTION 3: Composition/information on ingredients

3.1 Mixture

Components	CAS #	Percent (weight)
Potassium Hydroxide	1310-58-3	40 - 50%
Water	7732-18-5	50 - 60%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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4.2 Most important symptoms/effects, acute and delayed

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.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. CO₂, dry chemical, dry sand, alcohol-resistant foam.

5.2 Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

5.3 Special protective actions for fire-fighters

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

NIOSH - PEL-C Inhalation: 2 mg/m³

8.2 Appropriate engineering controls

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

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Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands.

Respiratory protection

Follow the OSHA respirator regulations if adequate ventilation is not available.

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Colorless Liquid
Color	Colorless
Odor	Pungent
Odor threshold	No data available.
pH	14
Melting point/freezing point	-34 °F
Boiling point or initial boiling point and boiling range	233.6 °F
Flash point	Not Flammable
Evaporation rate	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Vapor pressure	No data available.
Relative vapor density	No data available.
Density and/or relative density	1.4626 g/mL
Solubility	Soluble
Partition coefficient n-octanol/water (log value)	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic viscosity	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal use conditions.

10.4 Conditions to avoid

Excessive heat and incompatibles

10.5 Incompatible materials

Nitro compounds, Organic materials, Magnesium, Copper, Water, reacts violently with:, Metals, Light metals, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts., vigorous reaction with:, Alkali metals, Halogens, Azides, Anhydrides

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10.6 Hazardous decomposition products

Potassium oxides

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LD50 - Oral - Rat - 273 mg/kg

LC50 - Inhalation ATE - >20 mg/L

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache.

Germ cell mutagenicity

System: Cytogenetic Analysis

Route/Organism: Ascites tumor/rat

Dose: 1800 mg/kg

Carcinogenicity

Not listed

Reproductive toxicity

No data available.

STOT-single exposure

Respiratory system, Eyes, Skin

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

SECTION 12: Ecological information

Toxicity

LC50 – Gambusia affinis – 80 mg/L – 96h

TLm Mosquito fish 80 ppm/24 hr fresh water. /Conditions of bioassay not specified/

Persistence and degradability

Biodegradation is not applicable.

Bioaccumulative potential

Partitioning from water to n-octanol is not applicable.

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Mobility in soil
high mobility in soil.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations.
Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
EPA Waste Code: **D002**

SECTION 14: Transport information

DOT (US)

UN Number: UN1814
Class: 8
Packing Group: II
Proper Shipping Name: Potassium Hydroxide, solution
Reportable quantity (RQ): 5,000 lbs
Marine pollutant: No

IMDG

UN Number: UN1814
Class: 8
Packing Group: II
Proper Shipping Name: Potassium Hydroxide, solution

IATA

UN Number: UN1814
Class: 8
Packing Group: II
Proper Shipping Name: Potassium Hydroxide, solution

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Massachusetts Right To Know Components

Potassium hydroxide
CAS-No. 1310-58-3

New Jersey Right To Know Components

Potassium hydroxide
CAS-No. 1310-58-3

Pennsylvania Right To Know Components

Potassium hydroxide
CAS-No. 1310-58-3

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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Canadian Domestic Substances List (DSL)
Chemical name: Potassium hydroxide (K(OH))

CAS: 1310-58-3

CERCLA RQ Hazardous Substances
Potassium Hydroxide: 1,000 lbs

HMIS Rating

Potassium Hydroxide 45%	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

Disclaimer:

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