

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Potassium Hydroxide Solution, 45%
CAS number	1310-58-3
Synonyms	Caustic potash, Lye, Potash hydrate, Potash lye

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals
-----------------	----------------------

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1A
Eye Damage/irritation	Category 1
Specific target organ toxicity - single exposure	Category 1
Aspiration hazard	Category 1
Corrosive to metals	Category 1
Hazardous to the aquatic environment (acute)	Category 3

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

May be corrosive to metals
Harmful if swallowed
May be fatal if swallowed and enters airways
Causes severe skin burns and eye damage
Causes serious eye damage
Causes damage to organs
Harmful to aquatic life

Precautionary statements

Keep only in original container
Do not breathe fumes, mist, vapors, or spray
Wash arms, hands and face thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid release to the environment
Wear protective gloves and eye protection
IF SWALLOWED: Immediately call a POISON CENTER or physician
IF SWALLOWED: call a POISON CENTER or physician if you feel unwell
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
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.
IF exposed: call a POISON CENTER or physician.
Immediately call a POISON CENTER or physician
Specific treatment (Wash areas of contact with water immediately).
Rinse mouth
Do NOT induce vomiting.
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.
Dispose of contents in accordance with local, state, federal and international regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No information available

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Weight %
Potassium hydroxide	Caustic potash, Lye, Potash hydrate	1310-58-3	31.16%
Water	-	7732-18-5	68.84%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
In case of skin contact	IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, redness, and pain.
In case of eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Irritant, possibly corrosive to eye tissue. Symptoms include tearing, redness, pain, and impaired vision.
If swallowed	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. May be fatal if swallowed and enters airways. Causes severe skin burns and eye damage. Causes serious eye damage. Causes damage to organs. Danger! Corrosive. Causes severe burns. May be fatal if swallowed. Wash areas of contact with plenty of water for at least 15 minutes. If ingested, dilute with a large quantity of water. Do not induce vomiting. Call a physician. EYE CONTACT: Irritant, possibly corrosive to eye tissue. Symptoms include tearing, redness, pain, and impaired vision. SKIN CONTACT: May cause irritation, redness, and pain. CHRONIC EFFECTS / CARCINOGENICITY: Prolonged or repeated exposure may cause dermatitis.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	No information available

5.2 Specific hazards arising from the substance or mixture

Not combustible. Dissolves in water, releasing heat. If moist, reacts with many common metals to form hydrogen gas.

5.3 Special protective equipment and precautions for firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus.

5.4 Further information

Flash Point No information available

Autoignition Temperature No information available

Explosion limits

Upper No information available

Lower No information available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

NFPA

Health	Flammability	Instability	Physical hazards
-	-	-	-

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective gloves and eye protection.

6.2 Environmental precautions

No information available

6.3 Methods and materials for containment and cleaning up

Keep water away from release. Prompt cleanup and removal are necessary. Control runoff and isolate discharged material for proper disposal.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Do not mix with acids.

Hygiene measures

Handle in accordance with good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in corrosive resistant container with a resistant inner liner. Protect from freezing and physical damage.

Incompatibilities

Do not mix with acids.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. ACGIH Threshold Limit Values

Component	Type	Value
Potassium Hydroxide	TLV-Ceiling	2 mg/m ³

8.2 Exposure controls

Appropriate engineering controls

No specific controls are needed. Normal room ventilation is adequate.

Personal protective equipment

Eye/face protection

Wear protective gloves and eye protection. Safety glasses or goggles.

Skin protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Body Protection

No information available.

Respiratory protection

Normal room ventilation is adequate.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State
Appearance

Liquid
Colorless

Odor	Odorless
Odor Threshold	Data not available
pH	>13
Melting Point/Range	-13 °C
Boiling Point/Range	Approximately 100°C - Approximately 100°C
Evaporation Rate	Data not available
Flammability (solid)	Data not available
Flammability or explosive limit	Data not available
Vapor Pressure	Data not available
Vapor Density	Data not available
Density	1.26
Solubility	Miscible
Partition coefficient; n-octanol/water	Data not available
Autoignition Temp	Data not available
Decomposition Temp	Data not available
Viscosity	Data not available
Molecular Formula	Not applicable
Molecular Weight	Not applicable
VOC Content(%)	Data not available
Oxidizing properties	Data not available

9.2 Other safety information

No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

Data not available

10.2 Chemical stability

Data not available

10.3 Possibility of hazardous reactions

Data not available

10.4 Conditions to avoid

Keep only in original container. Strong acids, chlorinated Hydrocarbons, Acetone, metals such as aluminum, tin and zinc.

10.5 Incompatible materials

No information available

10.6 Hazardous decomposition products

Will not occur.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	273 mg/kg	50 mg/kg - 24h	Not listed

Skin corrosion/irritation

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). 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 in accordance with local, state, federal and international regulations.

Serious eye damage/eye irritation

Causes serious eye damage. Wear protective gloves and eye protection. 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 or physician.

Respiratory or skin sensitization

May be fatal if swallowed and enters airways. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Germ cell mutagenicity

Not applicable

Carcinogenicity

Not applicable

Specific target organ toxicity - single exposure

Causes damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific target organ toxicity - repeated exposure

Not applicable

Reproductive toxicity

Not applicable

Chronic effects

No information available

11.2 Additional Information

No information available

SECTION 12: Ecological information**12.1 Toxicity**

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2 Persistence and degradability

Data not available

12.3 Bio accumulative potential

Data not available

12.4 Mobility in soil

Data not available

12.5 Results of PBT and vPvB assessment

No information available

12.6 Endocrine disrupting properties

No information available

12.7 Other adverse effects

Data not available.

SECTION 13: Disposal considerations**13.1 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.

SECTION 14: Transport information**DOT (US)**

Sizes	1L, 4L, 20L, 500 mL
UN-no.	UN1814
Proper Shipping Name	Potassium Hydroxide, solution
Hazard Class	8
Packing Group	II

IMDG

Sizes	1L, 4L, 20L, 500 mL
-------	---------------------

UN-no.	UN1814
Proper Shipping Name	Potassium Hydroxide, solution
Hazard Class	8
Packing Group	II

IATA

Sizes	1L, 4L, 20L, 500 mL
UN-no.	UN1814
Proper Shipping Name	Potassium Hydroxide, solution
Hazard Class	8
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Listed (N-PROPYL ALCOHOL (CAS 71-23-8))

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed

SARA 304 Emergency release notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Potassium Hydroxide: 1000 lb final RQ

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed

US state regulations

US. Massachusetts RTK - Substance List

Listed

US. New Jersey Worker and Community Right-to-Know Act

Listed

US. Pennsylvania Worker and Community Right-to-Know Law

Listed

California Proposition 65

Not listed

SECTION 16: Other information

Issue date: 07/24/2024

Revision 0

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.