



SAFETY DATA SHEET

1. Identification

Product Identifier: POTASSIUM HYDROXIDE (1-45%)

Synonyms: Caustic Potash - liquid or solutions, Potassium Hydrate

Chemical Formula: KOH (1 - 45% in water)

Recommended Use: No information available.

Supplier: Seeler Industries, Inc.

1 Genstar Drive

Joliet, IL 60435

(815)740-2640

Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:

Acute toxicity, oral (Category 3)

Skin corrosion (Category 1A)

Eye irritation (Category 2A)

Risk Phrases:

R22: Harmful if swallowed.

R35: Causes severe burns.

Label Elements:

Trade Name: POTASSIUM HYDROXIDE (1-45%) SOLUTIONS AND CONCENTRATES

Signal Word: Danger



Hazard Statements:

H301: Toxic if swallowed.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

Precautionary Statements:

P280: Wear protective gloves / protective clothing.

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P307 + P311: IF exposed: Call a POISON CENTER or doctor / physician.

3. Composition | Information on Ingredients

CAS Number: 1310-58-3
EC Number: 215-181-3
Index Number: 019-002-00-8
Molecular Weight: 56.11 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Potassium Hydroxide	1310-58-3	215-181-3	1 -45 %	Yes	Substance
Water	7732-18-5	231-791-2	55 - 99 %	No	Mixture

4. First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Call a physician immediately.

Ingestion: DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

5. Fire-fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Avoid direct contact of liquid with water.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Contain and recover liquid when possible. Do not let product enter drains. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Keep in a tightly closed container. Store in a cool, dry, ventilated area. Protect against physical damage. Separate from acids and alkalis. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product.

8. Exposure Controls | Personal Protection

Airborne Exposure Limits:

Potassium Hydroxide (1310-58-3):

OSHA Permissible Exposure Limit (PEL): 2 mg/m³ Ceiling

ACGIH Threshold Limit value (TLV): 2 mg/m³ Ceiling

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times (10X) the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times (50X) the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless solution

Odor: Odorless

Odor Threshold: Not determined

pH: 13.5 (0.1 molar solution)

% Volatiles by volume @ 21C (70F): 90 (as water)

Melting Point: 10% Solution: -3C (27F) to 45% Solution -29C (-20F)

Boiling Point | Boiling Range: 10% Solution: 101C (213F) to 45% Solution: 132C (270F)

Flash Point: Not determined

Evaporation Rate (BuAC=1): No information found

Flammability: Not flammable

Upper | Lower Flammability or Explosive Limits: Not applicable

Vapor Pressure (mm Hg): 1 hPa (1 mmHg) at 719C (1,326F) for Potassium Hydroxide

Vapor Density (Air=1): No information found

Relative Density: 2.044 g/cm³ for Potassium Hydroxide

Solubility: Completely soluble in water

Partition Coefficient: n-octanol | water: No information found

Auto-ignition Temperature: Not applicable

Decomposition Temperature: No information found

Viscosity: No information found

10. Stability and Reactivity

Reactivity and | or Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat and incompatibles.

Incompatible Materials: Strong acids, Aluminum, Tin, Zinc, chlorinated hydrocarbons, Acetone.

Hazardous Decomposition Products: Potassium Oxide.

11. Toxicological Information

Emergency Overview: POISON! DANGER! CORROSIVE. CAUSES SEVERE BURNS TO SKIN, EYES, RESPIRATORY TRACT, AND GASTROINTESTINAL TRACT. MATERIAL IS EXTREMELY DESTRUCTIVE TO ALL BODY TISSUES. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED.

Potential Health Effects:

Inhalation: Respiratory tract irritant, may cause serious burns on acute contact. Severe injury is usually avoided by the self-limiting coughing and sneezing symptoms.

Ingestion: Toxic! Corrosive to mucous membranes and may cause perforation of the esophagus and stomach. Abdominal pain, nausea, vomiting, general gastro-intestinal upset can be expected.

Skin Contact: Irritant, possibly corrosive if contact is prolonged. Soreness, redness, destruction of skin may result.

Eye Contact: Irritant, possibly corrosive to eye tissues. Tearing, redness, pain, impaired vision are symptoms.

Chronic Exposure: Development of a defatting dermatitis on prolonged contact with Potassium Hydroxide has been reported. Continued irritation may lead to increased susceptibility to respiratory illness.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems, or impaired kidney or respiratory function may be more susceptible to the effects of the substance.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Potassium Hydroxide (1310-58-3)	No	No	None
Water (7732-18-5)	No	No	None

Acute Toxicity:

For Potassium Hydroxide:

Oral rat LD50: 273 mg/kg; Investigated as a mutagen. Skin Irritation Data (std Draize, 50 mg / 24 h): Human, Severe; Rabbit, Severe. Eye Irritation Data (Rabbit, non-std test, 1 mg / 24 h, rinse): Moderate

12. Ecological Information

Eco toxicity: For Potassium Hydroxide: TLm: 80 ppm / Mosquito fish / 24 h / Fresh water

Persistence and Degradability: No data available.

Bio accumulative Potential: No data available.

Mobility in Soil: No data available.

Other adverse effects: No data available.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

UN Number: UN1814

UN Proper Shipping Name: POTASSIUM HYDROXIDE, SOLUTION

Packing Group: II

Land Transport AORIRIO and GGVSIGGVE (Cross Border I Domestic)

Transport Hazard Class(es): 8

Maritime Transport IMOIGGGVSea

Transport Hazard Class(es): 8

Marine Pollutant: No

Air Transport ICAO-TI and IATA-OGR

Transport Hazard Class(es): 8

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Special Precautions for User: No additional information

15. Regulatory Information

Chemical Inventory Status - Part 1

Ingredient	TSCA	EC	Japan	Australia
Potassium Hydroxide (1310-58-3)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status - Part 2

Ingredient	Korea	Canada		Phil.
		OSL	NOSL	
Potassium Hydroxide (1310-58-3)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
Potassium Hydroxide (1310-58-3)	No	No	No	No
Water (7732-18-5)	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
Potassium Hydroxide (1310-58-3)	1000	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No	TSCA 12(b): No	COTA: No
SARA 311/312: Acute: Yes	Chronic: Yes	Fire: No
Reactivity: Yes	Pure / Liquid	Pressure: No

16. Other Information

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