


## SAFETY DATA SHEET

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

### 1. Identification

<b>Product identifier</b>	<b>Potassium Hydroxide Solution</b>
<b>Other means of identification</b>	Caustic Potash Solution, KOH, Potash Lye, Lye, Lye Solution
<b>Product family</b>	Alkali Metal Hydroxide
<b>Recommended use</b>	Saponification of fats; manufacture of biodiesel, soft soaps, fine chemicals, fertilizers, electrolyte for batteries
<b>Recommended restrictions</b>	None known
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company name</b>	ERCO Worldwide
<b>Address</b>	101 Highway 73 South Nekoosa, WI 54457 USA
<b>Telephone</b>	(715)-887-4000
<b>Website</b>	<a href="http://www.ercoworldwide.com">http://www.ercoworldwide.com</a>
<b>E-mail</b>	<a href="mailto:productinfo@ercoworldwide.com">productinfo@ercoworldwide.com</a>
<b>Emergency phone number</b>	Canada & USA: 1-800-424-9300 (CHEMTREC)
<b>Supplier</b>	Refer to Manufacturer

### 2. Hazard(s) Identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Acute toxicity, oral	Category 3
	Skin corrosion	Category 1A
	Serious eye damage	Category 1
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
<b>Environmental hazards</b>	Not currently regulated by OSHA, refer to Section 12 for additional information.	
<b>OSHA defined hazards</b>	This mixture does not meet the classification criteria according to OSHA HazCom 2012.	
<b>Label elements</b>		
<b>Signal word</b>	Danger	

<b>Hazard statement</b>	May be corrosive to metals. Toxic if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. May cause respiratory irritation.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep only in original container. Wash hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dusts or mists. Wear protective gloves, protective clothing, eye protection, face protection. Use only outdoors or in a well-ventilated area
<b>Response</b>	<b>IF SWALLOWED:</b> Immediately call a POISON Center or doctor. Rinse mouth. Do NOT induce vomiting. <b>IF ON SKIN (or hair):</b> Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. <b>IF INHALED:</b> Remove person to fresh air and keep comfortable for breathing. Call a Poison Center or doctor if you feel unwell. <b>IF IN EYES:</b> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON Center or doctor.  Absorb spillage to prevent material damage.
<b>Storage</b>	Store in a corrosion resistant container with a resistant inner liner. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	Dispose of contents and container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	No OSHA defined hazard classes. Other hazards which do not result in classification: Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. Reacts vigorously or violently with many organic and inorganic chemicals such as: acids, acrolein, acrylonitrile, chlorinated hydrocarbons (e.g. 1,2 dichloroethylene), chlorine dioxide, maleic anhydride, nitroethane, nitroparaffins, 2-nitrophenol, nitropropane, phosphorus, potassium persulfate, and tetrahydrofuran (containing peroxides). Chronic skin contact with low concentrations may cause dermatitis.
<b>Supplemental information</b>	Not applicable.

### 3. Composition/Information on Ingredients

<b>Chemical name</b>	<b>Common name and synonyms</b>	<b>CAS number</b>	<b>Conc. % By Weight</b>
Potassium Hydroxide	Caustic Potash, Lye, Potash, Potash Lye	1310-58-3	50 or less w/w%
Dihydrogen oxide	Water	7732-18-5	Balance
<b>Chemical name of impurities, stabilizing solvents and/or additives:</b>			None

### 4. First-Aid Measures

#### Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediately call a POISON CENTER or doctor/physician if symptoms develop or persist.

#### Skin Contact

Take off immediately all contaminated clothing. Immediately flush skin with running water for at least 20 minutes. Cover wound with sterile dressing. Do not rub area of contact. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed. Immediately call a POISON CENTER or doctor/physician.

#### Eye Contact

Immediately flush eyes, by holding the eyelids apart, with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER or doctor/physician.

#### Ingestion

Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Have a conscious person drink a glass of water or milk immediately if able to swallow. Immediately call a POISON CENTER or doctor/physician.

#### Most important symptoms/effects, acute and delayed

Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May be harmful or fatal if swallowed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.

**Indication of immediate medical attention and special treatment needed** Immediate medical attention is required. Causes chemical burns. Toxic if swallowed. Symptoms may be delayed. Probable mucosal damage may contraindicate the use of gastric lavage.

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

## 5. Fire-Fighting Measures

**Suitable extinguishing media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use as appropriate: Water Spray or Fog. Alcohol resistant foam. Dry chemical powder. Use water with caution. Contact with water will generate considerable heat and cause spattering if applied directly to potassium hydroxide.

**Unsuitable extinguishing media** Carbon dioxide (CO<sub>2</sub>).  
Use chemical extinguishing agents with caution. Some chemical extinguishing agents may react with this material.

**Specific hazards arising from the chemical** Not considered flammable. Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. The heat that is generated may be sufficient enough to ignite nearby combustible materials. Reacts vigorously or violently with many organic and inorganic chemicals such as: acids, acrolein, acrylonitrile, chlorinated hydrocarbons (e.g. 1,2 dichloroethylene), chlorine dioxide, maleic anhydride, nitroethane, nitroparaffins, 2-nitrophenol, nitropropane, phosphorus, potassium persulfate, and tetrahydrofuran (containing peroxides). Toxic fumes, gases or vapours may evolve on burning.

**Special protective equipment and precautions for firefighters** Potassium hydroxide solid and solutions are very corrosive and at high temperatures decomposition occurs giving off strong, corrosive fumes of potassium oxide. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. Chemical protective clothing (e.g. chemical splash suit) and positive pressure self-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

**Firefighting equipment/instructions** Fight fire with normal precautions from a reasonable distance. Evacuate the area promptly. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. Do not allow run-off from firefighting to enter drains or water courses. Dike for water control. Water must be used with extreme caution to extinguish a fire in an area where potassium hydroxide is stored and must not come into contact with the

potassium hydroxide. Potassium hydroxide does not burn and does not support combustion. However, closed containers may rupture violently when exposed to the heat of the fire. If possible, isolate materials not yet involved in the fire and move containers from the fire area if this can be done without risk and they have not been exposed to heat. If it is not possible to move containers, apply water in flooding quantities from the side and from a safe distance, to keep fire-exposed containers, tanks or car/trailer loads cool and absorb heat to help prevent rupture, and protect personnel. If necessary, use unmanned monitors and hose holders to keep cooling streams of water on fire-exposed tanks or containers until well after the fire is out. Water spray may also be used to knock down corrosive and toxic fumes and vapours which may be produced in a fire. Fire control or dilution water may be corrosive and/or toxic. Dike fire control water for appropriate disposal. Withdraw immediately in case of rising sound from venting safety device or any discolouration of tank. ALWAYS stay away from the ends of tanks, but be aware that flying material (shrapnel) from ruptured tanks may travel in any direction. Tanks or drums should not be approached directly after they have been involved in a fire, until they have been completely cooled down.

<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Not available.
<b>Hazardous combustion products</b>	None known. In the event of fire the following can be released: Potassium oxides.

## 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Ventilate the area. Remove sources of ignition. Stop leak if you can do so without risk. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift.  Small Spills: Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Dilute alkali with water and neutralize with acids (e.g. acetic acid / vinegar).

Large Spills: Prevent entry into waterways, sewer, basements or confined areas. If not recoverable, dilute with water or flush to holding area and neutralize. Remove with vacuum trucks or pump to storage/salvage vessels. Contact the proper local authorities.

Never return spills to original containers for re-use. Contaminated absorbent material may pose the same hazards as the spilled product. For waste disposal, see Section 13 of the SDS.

**Environmental precautions**

Avoid discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment.

## 7. Handling and Storage

**Precautions for safe handling**

Wear chemically resistant protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe mist. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Keep away from heat. Keep away from metals and other incompatibles. Label containers appropriately. Wash thoroughly after handling. When using, do not eat, drink or smoke. Avoid release to the environment. Any protective clothing or shoes which become contaminated with caustic potash should be removed immediately and thoroughly laundered before any reuse.

When diluting with water, slowly add caustic potash solution to cold water with mixing. Use cold water to prevent excessive heat generation. Heat will be produced during dilution. Never add water to the product. Full protective clothing, goggles and face shield should be worn. Do not add large quantities of water to caustic potash because excessive heat formation will cause boiling and spattering.

**Conditions for safe storage, including any incompatibilities**

Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Store away from incompatible materials (see Section 10 of the SDS). Store in original tightly closed container. Suitable container and packaging materials for safe storage: Polyvinyl chloride (PVC). Polypropylene. Polytetrafluoroethylene (PTFE). Mild steel may be used if the storage temperature does not exceed 50°C (122°F). For temperatures above 50°C (122°F), materials such as nickel or lined steel may be required.

Contact of caustic potash cleaning solutions with food and beverage products (in enclosed vessels or spaces) can produce lethal concentrations of carbon monoxide gas. Do not enter confined spaces such as tanks or pits without following proper entry procedures.

Aluminum equipment should not be used for storage and/or transfer.

## 8. Exposure Controls/Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Potassium Hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Potassium Hydroxide (CAS 1310-58-3)	TWA	2 mg/m <sup>3</sup>

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

### Individual protection measures, such as personal protective equipment

Safety shower and eyewash station must be provided in the immediate work area.

#### Eye/face protection

Wear eye/face protection. Chemical goggles and face shield are recommended. A full face respirator, in place of goggles and a face shield, will also provide excellent face protection.

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves. Wear as appropriate: Butyl rubber. Neoprene. Nitrile, Polyvinyl chloride (PVC), Viton™ rubber (fluor rubber). Advice should be sought from glove suppliers.

##### Other

Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH/MSHA approved air-purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may be used to reduce exposure. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Respirators should be selected based on the form and concentration of contaminants in air. Advice should be sought from respiratory protection specialists.

#### Thermal Hazards

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Do not breathe mist. Avoid contact with eyes, skin and clothing. When using, do not eat, drink or smoke. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and Chemical Properties

<b>Appearance</b>	Clear to white/light gray, viscous liquid
<b>Physical state</b>	Liquid
<b>Form</b>	Viscous liquid
<b>Color</b>	Clear to white/light gray
<b>Odor</b>	Odorless
<b>Odor threshold</b>	Not Available
<b>pH</b>	> 14 (at high alkali concentration in water pH scale is not applicable)
<b>Melting point/</b>	39.2 °F (4 °C) (50% solution)
<b>Freezing point</b>	-22 °F (-30 °C) (45% solution)
<b>Initial boiling point and boiling range</b>	269.6 °F (132 °C) (45% solution) 289.4 °F (143 °C) (50% solution)
<b>Flash point</b>	Not Applicable (does not burn)
<b>Evaporation rate</b>	Not Available
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit – lower (%)</b>	Not Applicable
<b>Flammability limit – upper (%)</b>	Not Applicable
<b>Explosive limit – lower (%)</b>	Not Available
<b>Explosive limit – upper (%)</b>	Not Available
<b>Vapor pressure</b>	27 mm Hg @ 60°C / 140°F (50% solution) 39 mm Hg @ 60°C / 140°F (45% solution)
<b>Vapor density</b>	Not available
<b>Relative density</b>	1.457 g/cm <sup>3</sup> @ 15.6°C / 60°F (45% solution) 1.516 g/cm <sup>3</sup> @ 15.6°C / 60°F (50% solution)
<b>Solubility (ies)</b>	
<b>Solubility (water)</b>	Soluble in all proportions
<b>Solubility (other)</b>	Soluble in ethanol, methanol and glycerol. Insoluble in diethyl ether and ammonia.
<b>Partition coefficient (n-octanol/water)</b>	Not Available
<b>Auto-ignition temperature</b>	Not Applicable
<b>Decomposition temperature</b>	Not Available
<b>Viscosity</b>	5.25 cSt @ 68°F / 20°C (50% solution)
<b>Other information</b>	
<b>Specific gravity</b>	1.46 @ 15.6°C / 60°F (45% solution) 1.52 @ 15.6°C / 60°F (50% solution)



## 10. Stability and Reactivity

<b>Reactivity</b>	Contact with most metals will generate flammable hydrogen gas. Contact with water will generate considerable heat. May be corrosive to metals. May be corrosive to: Aluminum. Bronze. Brass. Zinc.
<b>Chemical stability</b>	Material is stable under normal conditions. Rapidly absorbs moisture and carbon dioxide from the air forming potassium carbonate.
<b>Possibility of hazardous reactions</b>	Reacts vigorously or violently with many organic and inorganic chemicals such as: acids, acrolein, acrylonitrile, chlorinated hydrocarbons (e.g. 1,2 dichloroethylene, trichloroethylene), chlorine dioxide, maleic anhydride, nitroethane, nitroparaffins, 2-nitrophenol, nitropropane, phosphorus, potassium persulfate, and tetrahydrofuran (containing peroxides). Attacks plastics, such as polyethylene terephthalate, polybutylene terephthalate, thermoset polyesters (bisphenol-A fumarate (50-100%), isophthalic acid and general purpose), polyamide-imide (Torlon), polyurethane (rigid) and thermoset chlorinated polyester; elastomers, such as styrene-butadiene (SBR), polyacrylate, polyurethane, fluorosilicone, silicone, chlorinated polyethylene and soft rubber; and coatings, such as polyester and vinyls (5-100%) and epoxy (general purpose and chemical resistant epoxy) (50-100%) at room temperature.
<b>Conditions to Avoid</b>	Contact with incompatible materials. Avoid high temperatures. Do not use in areas without adequate ventilation
<b>Incompatible materials</b>	Metals. Water, moisture. Acrolein. Acrylonitrile. Chlorinated hydrocarbons. Chlorine dioxide. Maleic anhydride. Nitroethane. Nitroparaffins. Nitropropane. 2-nitrophenol. Phosphorus. Potassium persulfate. Tetrahydrofuran.
<b>Hazardous decomposition products</b>	None known. In the event of fire the following can be released: Potassium oxides.

## 11. Toxicological Information

### Information on likely routes of exposure

<b>Inhalation</b>	May cause severe irritation to the nose, throat, and respiratory tract. Breathing of mist is possible. Breathing this material is harmful and can cause death.
<b>Skin contact</b>	Contact with the skin can cause severe burns with deep ulcerations. Contact with solution or mist can cause multiple burns with temporary loss of hair at burn site. Solutions may not cause immediate pain or irritation upon skin contact. Prolonged or repeated contact with dilute solutions may cause drying and cracking of skin and possible skin damage.

<b>Eye contact</b>	Causes burns, serious eye damage and permanent injury to eye tissue. Can cause blindness. Mist or dust can cause irritation with high concentrations causing destructive burns.
<b>Ingestion</b>	Swallowing this material may be harmful or cause death. Harmful effects include burns and permanent damage to the digestive tract, including the mouth, throat, stomach and intestines. Symptoms may include severe abdominal pain and vomiting of blood. Blood loss through damaged tissue can lead to low blood pressure and shock. Death can result from ingestion. There is one reported case of bilateral hearing loss after accidental ingestion of potassium hydroxide.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	<p>Inhalation of mists can cause severe respiratory irritation. Symptoms may include coughing, choking and wheezing. Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.</p> <p>May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. Corrosive to the eyes and may cause severe damage including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.</p>
<b>Delayed and immediate effects and chronic effects from short-term and long-term exposure</b>	
<b>Effects of short-term (acute) exposure</b>	<p>Depending upon level and duration of exposure, other possible signs and symptoms from breathing, swallowing, and contact of this material with the skin may include: irritation of the nose, throat, airways, and lungs with cough, sneezing, perforation of the nasal septum, and blindness.</p> <p>Preexisting disorders of the following organs or systems which may be aggravated by exposure to this material (or a component) include: respiratory system (including asthma and other breathing disorders), and eyes.</p>
<b>Effects of long-term (chronic) exposure</b>	This material may cause the following effects: eye damage, blindness, respiratory tract damage (nose, throat, airways) lung damage, skin damage, and gastrointestinal tract damage.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	<p>Toxic if swallowed.</p> <p>The below product data is the calculated ATE values for this mixture. Individual ingredient component data appears below the product mixture ATE values.</p>

Product	Species	Test Results
Potassium Hydroxide Solution (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD <sub>50</sub>	Rabbit	> 2520 mg/kg
<i>Oral</i>		
LD <sub>50</sub>	Rat	410 mg/kg
Components	Species	Test Results
Potassium Hydroxide (CAS 1310 58-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD <sub>50</sub>	Rabbit	> 1260 mg/kg
<i>Inhalation</i>		
LC <sub>50</sub>		No Data in Literature
<i>Oral</i>		
LD <sub>50</sub>	Rat	205 mg/kg
Water (CAS 7732-18-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD <sub>50</sub>	Rabbit	Not available.
<i>Inhalation</i>		
LC <sub>50</sub>	Rat	Not available.
<i>Oral</i>		
LD <sub>50</sub>	Rat	> 89840 mg/kg
<b>Skin corrosion</b>	Hazardous by OSHA criteria. Category 1A. Causes severe skin burns and eye damage.	
<b>Serious eye damage</b>	Hazardous by OSHA criteria. Category 1. Causes serious eye damage.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not expected to be a respiratory sensitizer.	
<b>Skin sensitizer</b>	This product is not expected to be a skin sensitizer.	
<b>Germ cell mutagenicity</b>	Not expected to be mutagenic in humans.	
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed.	

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Hazardous by OSHA criteria. Category 3. May cause respiratory irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified as a specific target organ toxicity -repeated exposure.
<b>Aspiration toxicity</b>	This product is not classified as an aspiration hazard.
<b>Chronic effects</b>	Chronic skin contact with low concentrations may cause dermatitis act.

## 12. Ecological Information

<b>Ecotoxicity</b>	Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. However, may be neutralized by naturally occurring acidity in the environment. The ingredient ecotoxicity data appearing below is expected to be primarily associated with ph.
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Components	Species	Test Results
Potassium Hydroxide (CAS 1310-58-3)		
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC <sub>50</sub> Water flea ( <i>Ceriodaphnia dubia</i> )	56 mg/l, 48 hours
Fish	LC <sub>50</sub> Western mosquitofish ( <i>Gambusia affinis</i> )	80 mg/l, 96 hours
<b>Persistence and degradability</b>	No data is available on the degradability of this product. Biodegradation is not applicable to inorganic substances. Potassium hydroxide will be neutralized by acidity present in natural environment.	
<b>Bioaccumulative potential</b>	No accumulation in living organisms is expected due to high solubility and dissociation properties.	
<b>Mobility in soil</b>	High water solubility indicates a high mobility in soil.	
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

### 13. Disposal Considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents and containers in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.  Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

**DOT**

<b>UN number</b>	UN1814
<b>UN proper shipping name</b>	Potassium hydroxide solution
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	None
<b>Packing group</b>	II
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling. US CERCLA Reportable Quantity (RQ): 1000 lbs / 454 kg
<b>Special provisions</b>	B2; IB2; T7; TP2
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

**IATA**

<b>UN number</b>	UN1814
<b>UN proper shipping name</b>	Potassium hydroxide solution

<b>Transport hazard class(es)</b>	
Class	8
Subsidiary risk	None
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>ERG Code</b>	8L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
Passenger and cargo aircraft	Allowed
Cargo aircraft only	Allowed

**IMDG**

<b>UN number</b>	UN1814
<b>UN proper shipping name</b>	Potassium hydroxide solution
<b>Transport hazard class(es)</b>	
Class	8
Subsidiary risk	None
<b>Packing group</b>	II
<b>Environmental hazards</b>	
Marine pollutant	No.
<b>EmS</b>	F-A, S-B
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not available.

**DOT**



**IATA; IMDG**



## 15. Regulatory Information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not regulated.
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Potassium hydroxide (CAS 1310-58-3) Listed.
<b>SARA 304 Emergency release notification</b>	Not regulated.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - Yes
<b>SARA 302 Extremely hazardous substance</b>	Not listed.
<b>SARA 311/312 Hazardous chemical</b>	No
<b>SARA 313 (TRI reporting)</b>	Not regulated.

### Other federal regulations

<b>Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List</b>	Not regulated.
<b>Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)</b>	Not regulated.
<b>Safe Drinking Water Act (SDWA)</b>	Not regulated.

**US state regulations**

<b>US. Massachusetts RTK - Substance List</b>	Potassium hydroxide (CAS 1310-58-3)
<b>US. New Jersey Worker and Community Right- to-Know Act</b>	Not regulated.
<b>US. Pennsylvania RTK – Hazardous Substances</b>	Potassium hydroxide (CAS 1310-58-3)
<b>US. Rhode Island RTK</b>	Potassium hydroxide (CAS 1310-58-3)
<b>US. California Proposition 65</b>	California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

<b>Country(s) or region</b>	<b>Inventory name</b>	<b>On inventory (yes/no)*</b>
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).



## 16. Other Information

<b>Issue date</b>	3/30/2022
<b>Revision #</b>	6
<b>Revision Indicator</b>	Clarified precautionary statements and address updated.
<b>List of abbreviations</b>	ACGIH: American Conference of Governmental Industrial Hygienists CAS: Chemical Abstract Services CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980 CFR: Code of Federal Regulations DOT: Department of Transportation DSL: Domestic Substance List EINECS: European Inventory of Existing Commercial chemical Substances EPA: Environmental Protection Agency EPCRA: Emergency Planning and Community Right-to-Know Act HSDB® - Hazardous Substances Data Bank IARC: International Agency for Research on Cancer IATA: International Air Transport Association IBC: Intermediate Bulk Container ICAO: International Civil Aviation Organization IMDG: International Maritime Dangerous Goods LC: Lethal Concentration LD: Lethal Dose NIOSH: National Institute of Occupational Safety and Health NOEC: No observable effect concentration NTP: National Toxicology Program OECD: Organization for Economic Cooperation and Development OSHA: Occupational Safety and Health Administration PPE: Personal Protective Equipment RCRA: Registry of Toxic Effects of Chemical Substances RTECS: Registry of Toxic Effects of Chemical Substances SARA: Superfund Amendments and Reauthorization Act SDS: Safety Data Sheet STEL: Short Term Exposure Limit TLV: Threshold Limit Values TWA: Time Weighted Average

### References

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices (2014) Canadian Centre for Occupational Health and Safety, CCIInfoWeb Databases, 2014 (Chempendium, RTECs, HSDB, INCHEM)  
Material Safety Data Sheet from manufacturer.  
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2014.

**Disclaimer**

Information presented in this SDS is furnished in accordance with OSHA's Hazard Communication Standard (HCS) 2012.

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