

## 1. Identification

**Product identifier** Potassium Hydroxide Solution  
**Other means of identification** None.  
**Recommended use** General purpose solvent.  
**Recommended restrictions** Use in accordance with manufacturer's recommendations.

### Manufacturer/Importer/Supplier/Distributor information

**Company Name** Greenfield Global USA Inc.  
**Address** 1101 Isaac Shelby Drive  
 Shelbyville, KY 40065  
 USA  
**Telephone** 502.232.7600  
**Fax** 502.633.6100

**Company Name** Greenfield Global USA Inc.  
**Address** 58 Vale Road  
 Brookfield, CT 06804  
 USA  
**Telephone** 203.740.3471  
**Fax** 203.740.3481

**Emergency phone number**  
**USA** CHEMTREC: 1.800.424.9300 (CCN 17213)  
**International** CHEMTREC: +1.703.527.3887 (CCN 17213)

## 2. Hazard(s) identification

**Physical hazards** Corrosive to metals Category 1  
**Health hazards** Acute toxicity, oral Category 4  
 Skin corrosion/irritation Category 1A  
 Serious eye damage/eye irritation Category 1  
**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 3  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Danger  
**Hazard statement** May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. Harmful to aquatic life.  
**Precautionary statement**  
**Prevention** Keep only in original container. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response</b>	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.
<b>Storage</b>	Store locked up. Store in corrosive resistant container with a resistant inner liner.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%
Potassium hydroxide	1310-58-3	45 - 70
Water	7732-18-5	30 - 55

**Composition comments** All concentrations are in percent by weight unless otherwise indicated.

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Causes digestive tract burns. Coughing.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	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

<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding fire.
<b>Unsuitable extinguishing media</b>	Carbon dioxide (CO2).
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	The product is non-combustible. Contact with certain metals liberates flammable gas.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

This product is miscible in water. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling**

Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

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

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

Material	Type	Value
Potassium hydroxide Solution	Ceiling	2 mg/m3
<b>Components</b>	<b>Type</b>	<b>Value</b>
Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m3

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

Material	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m3

**Biological limit values**

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

**Appropriate engineering controls**

Good general ventilation 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. Eye wash facilities and emergency shower must be available when handling this product.

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

**Eye/face protection**

Wear safety goggles and a face shield.

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

**Skin protection**

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

Physical state	Liquid.
Form	Liquid.
Color	Clear to slightly hazy.

**Odor** Odorless.

**Odor threshold** Not available.

**pH** 14 (Literature)

**Melting point/freezing point** -27.4 °F (-33 °C)

**Initial boiling point and boiling range** 271.4 °F (133 °C) (760 mmHg)

**Flash point** None.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Vapor pressure** 6.4 mm Hg (Literature) (77 °F (25 °C))

**Vapor density** Not available.

**Relative density** 1.283 - 1.572 (68 °F (20 °C) Measured)

### Solubility(ies)

**Solubility (water)** Completely miscible

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

### Other information

**Explosive properties** Not explosive.

**Oxidizing properties** Not oxidizing.

## 10. Stability and reactivity

**Reactivity** Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** Hazardous polymerization does not occur.

**Conditions to avoid** Contact with incompatible materials.

**Incompatible materials** Metals. Copper. Magnesium. Organic compounds. Acids. Oxidizing agents. Maleic anhydride.

**Hazardous decomposition products** Potassium oxides.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

**Skin contact** Causes severe skin burns.

**Eye contact** Causes serious eye damage.

**Ingestion** Causes digestive tract burns. Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Causes digestive tract burns. Coughing.

## Information on toxicological effects

**Acute toxicity** Harmful if swallowed.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Potassium hydroxide (CAS 1310-58-3)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	365 mg/kg
<b>Skin corrosion/irritation</b>	Causes severe skin burns.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Not listed.		
<b>NTP Report on Carcinogens</b>		
Not listed.		
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>		
Not regulated.		
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.	
<b>Aspiration hazard</b>	Not an aspiration hazard.	
<b>Chronic effects</b>	Prolonged inhalation may be harmful.	

## 12. Ecological information

<b>Ecotoxicity</b>	Harmful to aquatic life.		
<b>Components</b>			
<b>Species</b>			
<b>Test Results</b>			
Potassium hydroxide (CAS 1310-58-3)			
<b>Aquatic</b>			
Fish	LC50	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.		
<b>Bioaccumulative potential</b>	No data available for this product.		
<b>Mobility in soil</b>	This product is miscible in water.		
<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. Incinerate the material under controlled conditions in an approved incinerator. 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/container 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).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

**UN number** UN1814  
**UN proper shipping name** Potassium hydroxide, solution  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Label(s)** 8  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Special provisions** B2, IB2, T7, TP2  
**Packaging exceptions** 154  
**Packaging non bulk** 202  
**Packaging bulk** 242

### IATA

**UN number** UN1814  
**UN proper shipping name** Potassium hydroxide solution  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards** No.  
**ERG Code** 8L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

### IMDG

**UN number** UN1814  
**UN proper shipping name** POTASSIUM HYDROXIDE SOLUTION  
**Transport hazard class(es)**  
**Class** 8  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-B  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

## 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)**

Not regulated.

### **CERCLA Hazardous Substance List (40 CFR 302.4)**

Potassium hydroxide (CAS 1310-58-3) Listed.

### **SARA 304 Emergency release notification**

Not regulated.

### **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

**Toxic Substances Control Act (TSCA)** All components of the mixture on the TSCA 8(b) inventory are designated "active".

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

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Corrosive to metal  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

### 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.

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Total food additive  
Direct food additive  
GRAS food additive

## US state regulations

### US. Massachusetts RTK - Substance List

Potassium hydroxide (CAS 1310-58-3)

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

Potassium hydroxide (CAS 1310-58-3)

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

Potassium hydroxide (CAS 1310-58-3)

### US. Rhode Island RTK

Potassium hydroxide (CAS 1310-58-3)

### California Proposition 65

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. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
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
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies 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, including date of preparation or last revision

<b>Issue date</b>	16-April-2019
<b>Revision date</b>	-
<b>Version #</b>	01
<b>Further information</b>	HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks.
<b>HMIS® ratings</b>	Health: 3 Flammability: 0 Physical hazard: 4
<b>Disclaimer</b>	This product is subject to Greenfield Global USA Inc.'s terms and conditions, which can be found at <a href="http://www.greenfield.com/tc-po-us/">http://www.greenfield.com/tc-po-us/</a> . Greenfield cannot anticipate all conditions under which this information and this product, or the products of other manufacturers in combination with this product, may be used. The user is responsible for the proper and safe use, handling, storage and disposal of the product, and assumes liability for any loss, injury, damage or expense arising from any failure to do so. The data in this sheet is based on information and experience available at the time of writing.