

Product: Potassium Hydroxide, 45% solution

Applicable Product N/A
Numbers:

Date: 1/24/2018

Revision: Orig

Document Number: EHS-SDS-1001

SAFETY DATA SHEET

Potassium Hydroxide 45%

SECTION 1 - IDENTIFICATION

Product Identifier/Name: Potassium Hydroxide, 45% solution
Other Means of Identification: None
Manufacturer Name: EaglePicher Technologies, PO Box 49, Joplin, MO 64802
Emergency Telephone: CHEMTREC: 1-800-424-9300
Recommended use: All proper and legal purposes
Recommend Restrictions: None known
Telephone for information: 1-417-623-8000
Product Identifier/Name: Potassium Hydroxide, 45% solution

SECTION 2 - HAZARD IDENTIFICATION

Physical hazards: Not classified
Health hazards: Skin corrosion/irritation, Category 1A
 Serious eye damage/eye irritation Category 1
Environmental hazards: Not classified
OSHA defined hazards: Not classified

Label elements:



Signal word: Danger

Hazard statement: H314 Causes severe skin burns and eye damage.
 H318 Causes serious eye damage.

Precautionary Statements:

P260 Do not breathe mist or vapor.
 P264 Wash thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response 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.

Storage	Store locked up
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulation
Hazards Not Otherwise Classified	None known
Supplemental Information	None

SECTION 3 - COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Name	C.A.S. Number	Percentage	Classification
POTASSIUM HYDROXIDE (KOH)	1310-58-3	45	Skin Corrosion/Irritation Serious eye Damage/Eye Irritation
Other components below reportable levels	NA	55	NA

SECTION 4 - FIRST AID MEASURES

- Inhalation:** Move to fresh air. Call a physician if symptoms develop or persist.
- Skin contact:** 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.
- Eye contact:** 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.
- Ingestion:** 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.

Most important symptoms/effects, acute and delayed:

Nausea, vomiting. Diarrhea. 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. Coughing.

Indication of immediate medical attention and special treatment needed:

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 under observation. Symptoms may be delayed.

General information: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: Not Applicable	Flammable Limits in Air % by Volume: NA	Extinguishing Media: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).	Auto-Ignition: Not Applicable
Special Fire Fighting Procedures	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Do not use water jet as an extinguisher, as this will spread the fire. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.		
Unusual Fire and Explosion Hazards	During fire, gases hazardous to health may be formed. No unusual fire or explosion hazards noted.		

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures:

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or vapor. 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 this SDS.

Methods and materials for containment and cleanup:

Large Spills: If safe to do so, stop the flow of material. Dike the spilled material, where this is possible and safe to do. Adsorb in vermiculite, dry sand, or earth and place into containers. Following product recovery, flush area with water. Contain and dispose of all water and runoff.

Small Spills: Wipe up with adsorbent material. Clean the surface thoroughly to remove residual contamination.

Environmental Precautions:

Avoid discharge into drains, water courses or onto the ground.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling: Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Provide adequate ventilation. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store locked up. Store in original, tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

STORAGE- In general, containers should be stored indefinitely at ambient temperatures.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Limits / Guidelines		
Chemical Name	OSHA Exposure Limits	TLV
POTASSIUM HYDROXIDE (KOH)	PEL not established (NIOSH TWA: 2 mg/m ³)	Ceiling: 2 mg/m ³
Other components below reportable levels	PEL not established	Not Established

Biological limit values: No biological exposure limits noted for the ingredient(s).

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

Exposure Controls:

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Protective Gloves: Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Eye/Face Protection: Wear safety glasses with side shields (or goggles) and a face shield.

Other Protective Equipment: Wear appropriate chemical resistant clothing.

Thermal Hazards: Wear appropriate thermal protective clothing when necessary.

General Hygiene Considerations: 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.

Administrative Controls:

Follow proper handling guidelines in this SDS.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (760 mm Hg)	270 °F (132.22 °C)
VAPOR PRESSURE (mm Hg, 25°C)	Not Available
VAPOR DENSITY (air=1)	Not Available
VOLATILE BY VOLUME (%)	Not Applicable
EVAPORATION RATE (butyl acetate=1)	Not Available
PHYSICAL STATE	Liquid.
SOLUBILITY IN WATER (% by weight)	Soluble
PH	14.0

APPEARANCE	Liquid - Colorless
ODOR	No odor
ODOR THRESHOLD	Not Available
MELTING POINT/FREEZING POINT	-20 °F (-28.89 °C)
FLAMMABILITY	Not Applicable
PERCENT VOLATILE	55% estimated
UPPER/LOWER FLAMMABILITY EXPLOSIVE LIMITS	Not Applicable
RELATIVE DENSITY	Not Available
DENSITY	12.10 lbs./gal.
SPECIFIC GRAVITY	1.45
PARTITION COEFFICIENT: (N-OCTANOL/WATER)	Not Available
AUTO IGNITION TEMPERATURE	Not Applicable
DECOMPOSITION TEMPERATURE	Not Available
VISCOSITY	Not Available

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY: The product is stable and non-reactive under normal conditions of use, storage and transport.

STABLE OR NOT STABLE: Material is stable under normal conditions.

INCOMPATIBILITY (MATERIAL TO AVOID): Contact with incompatible materials. Acids, Maleic anhydride.

HAZARDOUS DECOMPOSITION PRODUCTS: No hazardous decomposition products are known.

CONDITIONS TO AVOID: Contact with incompatible materials.

SECTION 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

Symptoms related physical, chemical, toxicological characteristics:	Nausea, vomiting. Diarrhea. Burning pain and severe corrosive skin to the damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing.
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Information on toxicological effects:

Acute toxicity	Not available
Skin corrosion/irritation	Causes severe skin burns and eye damage
Serious eye damage/eye irritation	Causes serious eye damage
Respiratory or skin sensitization	

Respiratory sensitization	Not a respiratory sensitizer
Skin sensitization	This product is not expected to cause skin sensitization
Germ Cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, OR OSHA
IARC Monographs, overall evaluation of carcinogenicity	Not listed.
OSHA Specifically Regulated Substances (29CFR 1910.1001-1050)	Not regulated.
US National Toxicology Program (NTP) Report on Carcinogens	Not listed.
Reproductive Toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified
Specific target organ toxicity - repeated exposure	Not classified
Aspiration hazard	Not an aspiration hazard
Chronic effects	Prolonged inhalation may be harmful

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Potassium Hydroxide (KOH) (CAS 1310-58-3)		
Aquatic		
Fish	LC50 Western mosquitofish(Gambusia affines)	80 mg/l, 96 hours

Persistence and degradability	Not data available
Bioaccumulative potential	Not data available
Mobility in soil	Not data available
Other adverse effects	No other environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

SECTION 13- DISPOSAL CONSIDERATIONS

Dispose in accordance with the applicable regulations in country and state. Disposal should be performed by licensed professional disposal firms knowledgeable in Federal, State or Local requirements of hazardous waste treatment and hazardous waste transportation.

- Disposal instructions:** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
- Hazardous waste code:** The waste code should be assigned in discussion between the user and the waste disposal company.
- Waste from residues /: unused products** 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.

SECTION 14- TRANSPORT INFORMATION

DOT

- UN number:** UN1814
- UN proper shipping name:** POTASSIUM HYDROXIDE, SOLUTION
- Transport hazard class:** 8
- Subsidiary risk:** -
- Packing group:** II
- Special precautions for user:** Read safety instructions, SDS and emergency procedures before handling.
- ERG number:** 154

SECTION 15- REGULATORY INFORMATION

- US Federal Regulation** This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
- TSCA Section 12(b) Export Notification** Not regulated
- CERCLA Hazardous Substance List** Potassium Hydroxide (K(OH)) (CAS 1310-58-3) Listed
- SARA 304 Emergency Release Notification** Not regulated
- OSHA Specifically Regulated Substances** Not regulated

- SARA Hazard Categories**
- Immediate Hazard – Yes
 - Delayed Hazard – No
 - Fire Hazard – No
 - Pressure Hazard – No
 - Reactivity Hazard – No

SARA 302 Extremely Hazardous Substance: Not Listed
SARA 311/312 Hazardous Chemical: Yes
SARA 313 (TRI Reporting) Not regulated

Other Federal regulations

US California Controlled Substances, CA
 Department of Justice (California Health and Safety Code Section 11100): Not Listed
 US Massachusetts RTK – Substance List: Potassium Hydroxide (K(OH)) (CAS 1310-58-3)
 US New Jersey Worker and Community Right-To-Know Act: Potassium Hydroxide (K(OH)) (CAS 1310-58-3)
 US Pennsylvania Worker and Community Right-To-Know Law: Potassium Hydroxide (K(OH)) (CAS 1310-58-3)
 US Rhode Island RTK: Potassium Hydroxide (K(OH)) (CAS 1310-58-3)
 US California Proposition 65: This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-domestic Substance 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	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).

SECTION 16- OTHER INFORMATION

HMIS ratings Health: 3 Flammability: 0 Physical Hazard: 0
 NFPA ratings Health: 3 Flammability: 0 Instability: 1

This SDS is intended to provide a summary of our knowledge and guidance regarding the use of this chemical. The information contained here has been compiled from sources considered by EaglePicher Technologies, LLC to be dependable and is accurate to the best of the Company’s knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations. This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. EaglePicher Technologies, LLC assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the chemical.