

SAFETY DATA SHEET

Potassium Hydroxide, 4.5%

Section 1. Identification

Product name : Potassium Hydroxide, 4.5% w/w

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

Identified uses : Oil well treatment additive
Creation date : 08/14/2015
Print date : 08/14/2015
Version : 1.0
Supplier's details : Deep South Chemical, Inc. 229 Millstone Road, Broussard LA 70518
 For Product Information/MSDSs Call: 337-837-9931
Emergency telephone number (with hours of operation) : CHEMTREC 800-424-9300 (U.S. 24 hour)
 (001)281-276-5400
 CANUTEC 613-996-6666 (Canada 24 hours)
 CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Skin Corrosion 1B: H314 Causes severe skin burns and eye damage
 Acute Toxicity 4: H302 Harmful if swallowed

2.2 GHS label elements



Hazard pictograms :

Signal Word : Danger! Causes severe skin burns and eye damage
 Warning! Harmful if swallowed

Hazard statements

H302 Harmful if swallowed
 H314 Causes severe skin burns and eye damage

Precautionary statements

P260 Do not breathe mist or spray
 P264 Wash hands thoroughly after handling
 P280 Wear protective gloves, protective clothing, eye protection, face protection
 P270 Do not eat, drink or smoke when using this product
 P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303+P361+P353 IF ON SKIN: remove/take off immediately all contaminated clothing. Rinse skin with water
 P304+P340 IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305+P351+P338 IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P310 Immediately call a POISON CENTER or doctor/physician
 P363 Wash contaminated clothing before reuse

P405
P501

Store locked up
Dispose of contents in accordance with local, state and federal regulations.

Classification system

NFPA ratings: Health (2) Fire (0) Reactivity (1)
HMIS ratings: Health (2) Fire (0) Reactivity (1)

Hazards not otherwise classified : No additional information.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Potassium Hydroxide	<20	1310-58-3
Water	>80	7732-18-5
Crystalline silica (quartz)	<1	14808-60-7

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Immediately call a Poison Center or doctor/physician..

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Center or doctor/physician.

Skin contact Flush contaminated skin with water for 15 minutes. Do not apply chemical neutralizing agents. Remove contaminated clothing and shoes while washing. Do not remove clothing if it sticks to the skin. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion Drink plenty of water. If victim is drowsy or unconscious, place on left side with head down. Seek medical attention. DO NOT INDUCE VOMITING.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Symptoms/injuries Causes severe skin burns and eye damage

Eye contact Corrosion of the eye tissue. Permanent eye damage. Causes serious eye damage.

Inhalation Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Skin contact Caustic burns/corrosion of the skin. Slow-healing wounds.

Ingestion Abdominal pain. Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Nausea. Possible esophageal perforation.

Chronic symptoms Dry skin. Skin rash/inflammation. Possible inflammation of the respiratory tract.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Corrosive; monitor edema and respiratory distress.

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Product is not combustible. Use water/foam, dry powder, carbon dioxide, ABC fire extinguisher powder; water fog should be used to cool fire-

exposed containers, structures and to protect personnel as appropriate to surrounding fire.

Unsuitable extinguishing media High pressure water jet.

5.2 Specific hazards arising from the chemical

Fire Hazard Not flammable.
Explosion Hazard Not available.
Reactivity Not reactive.

5.3 Advice for firefighters

Precautionary measures Keep upwind. Consider evacuation. Have neighborhood close doors and windows.
Firefighting instructions Cool tanks/drums with water spray. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Special protective equipment for fire-fighters Fire-fighters should wear full protective equipment and self-contained breathing apparatus.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact. Wash contaminated clothes. Evacuate unnecessary personnel. Keep containers closed.

6.1.2 For emergency responders

Equip cleanup crew with proper protection. Ventilate area. Stop leak if safe to do so.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

For containment Take up liquid spill into inert absorbent material.
Methods for cleaning up Carefully collect the spill. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Soak up spills with inert solids, such as clay or diatomaceous earth, as soon as possible. Collect spillage. Store away from other materials.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures Keep container tightly closed when not in use. Ensure good ventilation/exhaustion at the workplace. Keep ignition sources away. Protect against electrostatic charges.

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including incompatibilities

Comply with applicable regulations. Keep only in the original container in a cool, well ventilated area away from strong acids and bases, sources of ignition, heat sources, combustible materials and metals. Keep container closed when not in use. Suitable packaging materials include stainless steel, nickel, polyethylene, polypropylene, glass and stoneware. Unsuitable include lead, aluminum, copper, tin, zinc and bronze.

Section 8. Exposure controls/personal protection

8.1 Control parameters

1310-58-3 Potassium Hydroxide

PEL (OSHA) TWA: 2 mg/m³

TLV (ACGIH) Ceiling: 2 mg/m³

8.2 Exposure controls

Appropriate engineering controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.
Personal protective equipment	Avoid all unnecessary exposure.
Materials for protective clothing	Give good resistance: butyl rubber, natural rubber, neoprene, nitrile rubber, polyethylene, PVC, tetrafluoroethylene, viton. Give less resistance: chlorinated polyethylene, styrene-butadiene rubber, nitrile rubber/PVC. Give poor resistance: PVA, natural fibers.
Eye/face protection	Wear chemical safety goggles. When transferring material, wear face-shield in addition to chemical safety goggles.
Hand protection	Chemical-resistant gloves: rubber gloves/Neoprene gloves.
Skin protection	Corrosion-proof clothing.
Respiratory protection	Do not breathe vapor. NIOSH approved respiratory protection should be worn if exposure limits are exceeded. A NIOSH approved respirator is generally acceptable for concentrations up to 10 times the PEL. Use a NIOSH approved air-supplied respirator for higher concentrations, unknown concentrations and for oxygen deficient atmospheres. Use only outdoors or in a well-ventilated area.

Section 9. Physical and chemical properties

Physical state	: Liquid
Color	: Clear, colorless
Odor	: Odorless
pH	: >12
Melting/freezing point	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Evaporation rate	: No data available (butyl acetate = 1)
Flammability	: No data available
Lower and upper explosive limits	: No data available
Vapor pressure	: Not determined
Vapor density	: No data available (Air = 1.0)
Relative density	: 1.038 at 68°F
Density	: 8.66 lbs/gal
Solubility in water	: Soluble
Partition coefficient n-octanol/water	: Not determined
Auto-ignition temp.	: No data available
Decomposition temp.	: Not determined

Viscosity : No data available
VOC : Not applicable

Section 10. Stability and reactivity

10.1 Reactivity

On heating will release corrosive gases/vapors.

10.2 Chemical stability

Product is stable at ambient temperature and pressure.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

Avoid incompatible materials.

10.5 Incompatible materials

Acids, acrolein, alcohols, aluminum, chlorine, halogenates..

10.6 Hazardous decomposition products

Product is stable.

Section 11. Toxicological Information

Information on toxicological effects

Toxicological Data:

Acute Toxicity	Potassium Hydroxide (1310-73-2): LD50 oral rat 273 mg/kg Water (7732-18-5): LD50 oral rat >90,000 mg/kg
Skin corrosion	Corrosive to skin and eyes. Human skin (draize), 50 mg/24 hr = Severe
Respiratory or skin sensitization	Not available
Germ cell mutagenicity	Not available
Carcinogenicity	Contains crystalline silica
Reproductive toxicity	Not available
STOT- single exposure	Not available
STOT-repeated	Not available
Aspiration hazard	Not available
Other information	Most likely exposure routes are skin and eye contact. Product contains crystalline silica; respirable silica dust is unlikely to be encountered in normal product use.

Section 12. Ecological information

Ecological- General: This product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Toxicity	Not available
Persistence and degradability	Not available
Bioaccumulative potential	Not available
Mobility in soil	Not available
Other adverse effects	Not available

Section 13. Disposal considerations

Disposal methods Neutralize and dilute with water and as indicated by local, state and federal regulations.
Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment. Material is characterized as hazardous under RCRA (Corrosive D002)

Section 14. Transport information

DOT Transport Information: UN 1814, Potassium Hydroxide, Solution (4.5%) 8, PG III

RQ = 1,000 lbs KOH (5,000 pounds this product)
Environmental Hazards: Not a marine pollutant
ERG# 154

Section 15. Regulatory information

Toxic Substances Control Act (TCSA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

CERCLA RQ-40 CFR 302.4(a)

<u>Component</u>	<u>CERCLA RQ (lbs)</u>
Potassium hydroxide	1000

SARA 302 Components-40 CFR 355 Appendix A

<u>Component</u>	<u>TPQ(Threshold Planning Quantity) (lbs)</u>
None	

Section 311/312 Hazard Class-40 CFR 370.2

Immediate (X)
Delayed ()
Fire ()
Reactive ()
Sudden Release of Pressure ()

SARA 313-40 CFR 372.65

<u>Component</u>	<u>CAS Number</u>	<u>%(by weight)</u>
Potassium hydroxide	1310-58-3	<20

The following product components are cited on the lists below:

<u>Component</u>	<u>CAS Number</u>	<u>List Citations</u>
Potassium hydroxide	1310-58-3	NJ, MA, PA

TSCA: Listed

CA65: Product contains crystalline silica, a chemical known to the State of California to cause cancer or reproductive toxicity.

Section 16. Other information

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