

# CAUSTIC POTASH (KOH)

## SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	CAUSTIC POTASH (KOH)
<b>Other Means of Identification</b>	Potassium Hydroxide
<b>Product Family</b>	Alkalinity Control
<b>Recommended Use</b>	Drilling Fluid Additive.
<b>Supplier Identifier</b>	Bri-Chem Supply Ltd., Bay 4, 5510 - 3rd Street SE, Calgary, Alberta, T2H 1J9, Bri-Chem Supply, 403-252-5904, www.brichemsupply.com
<b>Emergency Phone No.</b>	ChemTrec, (800) 424-9300, 24/7

## SECTION 2. HAZARD IDENTIFICATION

### Classification

Acute toxicity (Oral) - Category 1; Skin corrosion - Category 1A; Serious eye damage - Category 1

### Label Elements



Signal Word:

Danger

Hazard Statement(s):

Fatal if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

Precautionary Statement(s):

Prevention:

Do not breathe dusts or mists.

Wash hands and skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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 CENTRE or doctor.

Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Potassium hydroxide	1310-58-3	100	

## SECTION 4. FIRST-AID MEASURES

### First-aid Measures

#### Inhalation

Get immediate medical attention. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. If not breathing, give artificial resuscitation.

#### Skin Contact

Get medical attention immediately. Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes.

#### Eye Contact

Get immediate medical aid. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water while holding the eyelid(s) open for 15 minutes. Take care not to rise contaminated water into the unaffected eye or onto the face.

#### Ingestion

DO NOT INDUCE VOMITING. If victim is conscious and alert, give 2-4 cupfuls of milk or water. NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. If vomiting occurs, keep the head low so that the stomach content does not get into the lungs. Get immediate medical attention.

### Immediate Medical Attention and Special Treatment

#### Special Instructions

Treat symptomatically and supportively. The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

#### Unsuitable Extinguishing Media

Use water with caution and in flooding amounts.

### Specific Hazards Arising from the Product

Contact with moisture or water can cause violent exothermic reaction.

### Special Protective Equipment and Precautions for Fire-fighters

Firefighters must wear a full-body encapsulating chemical protective suit with positive-pressure self-contained breathing apparatus (SCBA).

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

### Environmental Precautions

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Use appropriate safety equipment. Evacuate unnecessary personnel. Collect dry material by shoveling; liquid material can be removed with a vacuum truck. Flush spill area with water followed by liberal covering of sodium carbonate.

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Collect contaminated material, and clean up materials, in an approved container for disposal. Flush spill area thoroughly with water. Avoid generating dusty conditions.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Wash thoroughly after handling. Avoid any contact with eyes, skin and clothing. Discard non-rubber shoes. Avoid contaminated leather articles (belts, watch bands, etc.). Wash clothing before re-use. When mixing in water, add product SLOWLY, with constant stirring, to warm (30°C) water. CAUTION: When mixing with water or dissolving caustic potash in water, large amounts of heat will be generated, causing water to become very hot or even to boil. Handle the solution with precautions as hot object. Ensure temperature of water does not exceed 95°C to prevent boiling.

Remove contaminated clothing and protective equipment before entering eating areas or leaving work area. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

### Conditions for Safe Storage

Store in a cool, dry, well-ventilated place. Keep container tightly closed and away from incompatible materials. Keep away from strong acids. Keep away from water. Keep away from metals. Keep away from flammable liquids. Keep away from organic halogens. Empty packages contain residual hazardous materials and must be handled with the same care and attention as if full.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. 2 mg/m<sup>3</sup> ceiling.

### Appropriate Engineering Controls

Use local exhaust ventilation, process enclosure or other engineering controls to maintain concentration of airborne dust below TLV.

### Individual Protection Measures

#### Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible. Do not wear contact lenses.

#### Skin Protection

Wear appropriate protective clothing and gloves to prevent skin contact.

#### Respiratory Protection

Always use a NIOSH-approved respirator when necessary. Follow the OSHA respirator regulations found in 29 CFR 1910.134.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

<b>Appearance</b>	White - yellow flakes.
<b>Odour</b>	Odourless
<b>pH</b>	13.5 (0.1 M solution)
<b>Melting Point/Freezing Point</b>	360 °C (melting)
<b>Initial Boiling Point/Range</b>	1320 °C
<b>Flash Point</b>	Not applicable
<b>Evaporation Rate</b>	Not available
<b>Upper/Lower Flammability or Explosive Limit</b>	Not available (upper); Not available (lower)
<b>Vapour Pressure</b>	Not available
<b>Vapour Density (air = 1)</b>	Not available
<b>Relative Density (water = 1)</b>	2.044 at 20 °C (68 °F)
<b>Solubility</b>	Soluble in water

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<b>Auto-ignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available (kinematic)
<b>Other Information</b>	
<b>Physical State</b>	Solid
<b>Molecular Formula</b>	KOH
<b>Molecular Weight</b>	56.1047
<b>Critical Temperature</b>	Not applicable

## SECTION 10. STABILITY AND REACTIVITY

### Chemical Stability

Normally stable. Readily absorbs carbon dioxide and moisture from the air and deliquesces.

### Possibility of Hazardous Reactions

Hazardous polymerization has not been reported.

### Conditions to Avoid

Incompatible materials, moisture, contact with water, acids, metals.

### Incompatible Materials

Generates large amounts of heat when in contact with water and may steam and splatter. Reacts with chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6-trinitrotoluene, bromoform+ crown esters, acid alcohols, sugars, germanium cyclopentadiene, maleic dicarbide. Corrosive to metals such as aluminum, tin and zinc to cause formation of flammable hydrogen gas.

### Hazardous Decomposition Products

Oxides of potassium.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

LD50 Oral Rat: 273 mg/kg (<BR)

Draize Test (rabbit), skin: 50 mg/24-hr. Severe.

### Skin Corrosion/Irritation

CORROSIVE. Causes skin burns. May cause deep, penetrating ulcers of the skin.

May cause severe burns and tissue destruction.

### Serious Eye Damage/Irritation

CORROSIVE. Causes severe eye burns. May cause irreversible eye injury. Contact may cause ulceration of the conjunctiva and cornea. Eye damage may be delayed.

May cause severe damage including burns and blindness.

### STOT (Specific Target Organ Toxicity) - Single Exposure

#### Inhalation

Harmful if inhaled. Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulties and possible coma.

CORROSIVE: Causes severe irritation of the respiratory tract and mucous membranes with coughing, burns, difficulty breathing.

#### Skin Absorption

CORROSIVE: May cause severe burns and tissue destruction.

#### Ingestion

Harmful if swallowed. May cause digestive tract burns with abdominal pain, vomiting and possible death.

CORROSIVE: Severe burns and complete tissue perforation of mucous membranes of mouth, throat and stomach.

### STOT (Specific Target Organ Toxicity) - Repeated Exposure

Harmful.

Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis.

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Severe exposures could result in chemical pneumonia and pulmonary edema..

### Respiratory and/or Skin Sensitization

CORROSIVE: May cause severe burns and tissue destruction.

### Carcinogenicity

ACGIH, IARC, NIOSH, NTP or OSHA: Not listed.

No information was located for: Sexual Function and Fertility, Germ Cell Mutagenicity, Interactive Effects

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic organisms,  
LC50 96H 80 mg/L (Mosquito fish)  
LC50 24H 165 mg/L (Guppy).

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose of in accordance with federal, provincial and local government regulations.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	1813	Potassium Hydroxide, solid	8	II

**Special Precautions** Not applicable

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

Not applicable

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

#### WHMIS 1988 Classification



Class D1B



Class E

D1B - Toxic; E - Corrosive

#### Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

#### Additional Canadian Regulatory Lists

CAS # 1310-58-3 is listed on Canada's Ingredient Disclosure List.

## SECTION 16. OTHER INFORMATION

**NFPA Rating** Health - 3 Flammability - 0 Instability - 1

**SDS Prepared By** Bri-Chem Supply Ltd

**Phone No.** (403) 252-5904

**Date of Preparation** December 10, 2015

**Disclaimer** This Health and Safety information is correct to the best of our knowledge and belief at the

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date of its publication, but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as guidance for safe handling, storage, and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment. Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet.

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