



BASP CHEMICAL PRODUCTS LTD.

MATERIAL SAFETY DATA SHEET

CAUSTIC POTASH LYE - MSDS

Chemical Product and Company Identification

Product Name : Caustic Potash Lye
Chemical Name : Potassium Hydroxide
Chemical Formula : KOH
Distributor : **BASP Chemical Products Limited**
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Composition and information of Ingredients

COMPOSITION		
Name	CAS #	% by Weight
Potassium Hydroxide	1310-58-3	100
Toxicological Data on Ingredients: Not Available.		

Hazardous Identification

Potential Acute Health Effects: Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant, corrosive), of ingestion, of inhalation. The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.



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Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to upper respiratory tract, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact:

In case of skin contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used, washing clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled by mistake, get some fresh air immediately. If the person is not able to breath, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.



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Fire and Explosion Data

Flammability of the Product :Non-Flammable
Auto – Ignition Temperature :Not Applicable
Flash Points :Not Applicable
Flammable Limits :Not Applicable
Products of Combustion: Emits Na₂O fumes when heated to decomposition.

Fire Hazards in Presence of Various Substances :Metals, Acids

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: **Not Available.**

Risks of explosion of the product in presence of static discharge: Not Available.

Special Remarks on Explosion Hazards: Not Applicable.

Special Remarks on Fire Hazards:

Violent reaction or ignition under appropriate conditions with acids, alcohols, p-bis(1,3-dibromoethyl) benzene, cyclopentadiene, germanium, hyponitrous acid, maleic anhydride, nitroalkanes, 2-nitrophenol, potassium peroxodisulfate, sugars, 2,2,3,3-tetrafluoropropanol, thorium dicarbide. Molten ortho -nitrophenol reacts violently with potassium hydroxide. When potassium hydroxide and tetrachloroethane are heated, a spontaneously flammable gas, chloroacetylene, is formed. When phosphorus is boiled in a solution of potassium hydroxide, phosphine gas is evolved which is spontaneously flammable. 1,2-Dichloroethylene and Potassium hydroxide reaction produces chloroacetylene which is spontaneously flammable in air. Potassium Persulfate and a little Potassium hydroxide and water will ignite. When wet, attacks metals such as aluminum, tin, lead, and zinc, producing flammable hydrogen gas.

Special Remarks on Explosion Hazards:

Potentially explosive reaction with bromoform + crown ethers, chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6-trinitrotoluene. Reaction with ammonium hexachloroplatiate(2-) + heat forms heat sensitive explosive product. Potassium hydroxide will cause explosive decomposition of maleic anhydride. Detonation will occur when potassium hydroxide is mixed with n-methyl-nitroso urea and methylene chloride. Nitrogen trichloride explodes on contact with potassium hydroxide.

Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.



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LARGE Spill

Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Handling and Storage

Precautions: Keep container dry. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as organic materials, metals, acids, moisture.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

Exposure Control / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Splash goggles. Lab coat. Dust respirator. Be sure to use an approved / certified respirator or equivalent gloves.

Personal Protection in case of large Spill: Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Consult local authorities for acceptable exposure limits

Physical and Chemical Properties

Physical State and appearance:	Solid (Solid Pellets)
Odor:	Odorless
Taste:	Not Available
Molecular Weight:	56.11 g/mole
Color:	White



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pH (1% soln/water):	13 [Basic]
Boiling Point:	Decomposition temperature: 1384°C (2523.2°F)
Melting Point:	380°C (716°F)
Critical Temperature:	Not available
Specific Gravity:	2.044 (Water = 1)
Solubility:	Easily soluble in cold water, hot water. Insoluble in diethyl ether.
Vapor Pressure:	Not applicable.
Vapor Density:	Not applicable.
Volatility:	Not applicable.
Odor Threshold:	Not applicable.
Water / Oil Dist. Coeff.:	Not applicable.
Dispersion Properties:	See solubility in water.
Solubility in solvents:	Not applicable.

Stability and Reactivity Data

Stability: This Product is Stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, dust generation, exposure to moist air or water.

Incompatibility with various substances: Highly reactive with acids. Reactive with organic materials, metals, moisture.

Corrosivity: Extremely corrosive in presence of aluminum, brass, and zinc. Slightly corrosive in presence of copper, of stainless steel(304). Non-corrosive in presence of stainless steel(316).

Special Remarks on Corrosivity: When wet, attacks metals such as aluminum, tin, lead, and zinc, producing flammable hydrogen gas. Severe corrosive effect on brass and bronze.

Special Remarks on Reactivity: Not applicable.

Toxicological Information

Routes of Entry: Absorbed through Skin, Inhalation. Ingestion.

Toxicity to Animals: Not Available.

Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. May cause damage to the following organs: upper respiratory tract, skin, eyes.



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Other Toxic Effects on Humans: Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (corrosive, irritant), of eye contact (corrosive), of ingestion.

Special Remarks on Chronic Effects on Humans: May affect genetic material based on animal data.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes severe skin irritation and burns. Eyes: Causes severe eye irritation and burns. May cause irreversible eye injury. Inhalation: Causes severe irritation and burns of the respiratory tract and mucous membranes. Irritation may lead to chemical pneumonitis. Ingestion: Harmful if swallowed. May cause severe and permanent damage to the digestive tract. Causes severe irritation and burns of the gastrointestinal (digestive) tract with abdominal pain, vomiting and possible death. May cause perforation of the digestive tract. Chronic Potential Health Effects: Chronic contact with dilute solutions of potassium hydroxide can cause dermatitis. Inhalation can produce chronic productive cough, and shortness of breath.

Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 80 mg/l 24 hours [Mosquito Fish].

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Disposal Consideration

Product Disposal:

Untreated SBP waste must never be discharged directly in to the sewers. Review National / Regional regulations.

Packaging Disposal:

Packing material does not get contaminated & can be disposed off by usual methods in accordance with National / Regional requirements.

Transport Information

UN No. & Symbols : Class 8: Corrosive material



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Road & Rail Transport	:Not available.
GGVE / GGVS	:Not applicable
IMDG	:Not applicable
Air Transport	:Not applicable
P Phrases	:Not applicable
S Phrases	:Not applicable

Regulatory Information

Health and safety information: Potassium Hydroxide.

Other Classifications: Not Applicable

Protective Equipment:

Gloves, Lab coat, Dust respirator. Be sure to use an approved/certified respirator or equivalent.
Splash goggles

Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall **BASP Chemical Products Limited** be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if **BASP Chemical Products Limited** has been advised of the possibility of such damages.