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Material Safety Data Sheet
Caustic Potash Flakes (Potassium Hydroxide)

Section 1 - Chemical Product and Company Identification

MSDS Name	: Caustic Potash Flakes (Potassium Hydroxide)
Chemical Name	: Potassium Hydroxide
Chemical Family	
Synonyms	: Caustic Potash, Potash Lye, Potassium Lye, KOH, Potassium Hydrate, Potassium Hydrate, Potassium Hydrate (KOH), Potassium Caustic, Caustic Potash Flakes, Caustic Potash Solid, Potassia, Potassium Hydroxide Solution (for liquid forms), Potash Liquor (for liquid forms)
CAS No	: 1310-58-3
UN No	: 1813
Hazchem Code	: 2W
ERG No	: 154
EAC	: 2W
Company Identification	: The BTTCO Overseas 6, Ashirvad Complex, Nr. Sardar Patel Seva Samaj Hall, Navrangpura, Ahmedabad – 380009
Telephone Number	: +91-94265 96891
Contact Person	: Mr. Dinesh Lunkad

Section 2 Composition, Information on Ingredients

Chemical Name	: Potassium Hydroxide
Chemical Formula	: KOH
CAS No	: 1310-58-3
Molecular Weight	: 56.11
Percent	: 46-50%

Section 3 Hazards Identification

Emergency Overview

Appearance	: White to gray-white solid
Caution!	: May cause eye irritation. Hygroscopic (absorbs moisture

from air).

Target Organs : No data found.

Potential Health Effects

Eye : May cause mild eye irritation.

Skin : May cause skin irritation.

Ingestion : Causes gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation : May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness chest pain, muscle pain, and increase white blood cell count.

Chronic : May cause kidney damage.

Section 4 First Aid Measures

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

Skin Contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash 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, remove to fresh air. If not breathing, 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 waist band. 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.

Serious Ingestion : Not available.

Section 5 Fire Fighting Measures

Flammability of the Product : Non-flammable
Auto-Ignition Temperature : Not applicable
Flash Points : Not applicable
Flammable Limits : Not applicable
Products of Combustion : Not available

Explosion Hazards : Not explosive by mechanical impact or static discharge. However, explosive hazards exist during chemical interactions (e.g., contact with nitrogen trichloride, nitro compounds, or maleic anhydride).

Fire Hazards / Hazardous Decomposition Products : Highly exothermic (generates intense heat) when dissolving in water. When wet, it reacts with metals (such as aluminum, tin, lead, and zinc) to form highly flammable hydrogen gas.

Extinguishing Media : Use extinguishing media appropriate for the surrounding fire. Avoid using direct streams of water onto the flakes, as water generates extreme heat upon contact with KOH.

Section 6 - Accidental Release Measures

General Information : Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks : Vacuum or sweep up material and place into a suitable

disposal container. Clean up spills immediately.
Avoid creating airborne particles. Provide ventilation.

Section 7 - Handling and Storage

Handling : 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).

Section 8 - Exposure Controls, 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. Synthetic apron. Vapour and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapour 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 : CEIL: 2 (mg/m3) from OSHA (PEL) [United States]
CEIL: 2 (mg/m3) from ACGIH (TLV) [United States]
Consult local authorities for acceptable exposure limits.

Section 9 - Physical and Chemical Properties

Physical state and Appearance : Solid. (Solid pellets.)
Odor : Odorless

Taste	: Not available
Molecular Weight	: 56.11 g/mole p. 4
Color	: White
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)
Vapor Pressure	: Not applicable
Vapor Density	: Not available
Volatility	: Not available
Odor Threshold	: Not available
Water/Oil Dist. Coeff.	: Not available
Ionicity (in Water)	: Not available
Dispersion Properties	: See solubility in water.
Solubility	: Easily soluble in cold water, hot water. Insoluble in diethyl ether.

Section 10 - Stability and Reactivity

Stability	: The 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 Reactivity	: Hygroscopic (absorbs moisture from air). When dissolved in water or alcohol or when the solution is treated with acid, much heat is generated. Reacts violently with acids, halogens, halogenated hydrocarbons, maleic anhydride, organic anhydrides, isocyanates, alkylene oxides, epichlorohydrin, aldehydes, alcohols, glycols, phenols, cresols, caprolactam solution. Also incompatible with nitro compounds (nitrobenzene, nitromethane, nitrogen

trichloride), organic materials, acid anhydrides, acid chlorides, magnesium, peroxidized tetrahydrofuran, chlorine dioxide, maleic dicarbide, sugars. When wet attacks metals such as aluminum, tin, lead, and zinc. When wet, attacks metals such as aluminum, tin, lead, and zinc, producing flammable hydrogen gas. Severe corrosive effect on brass and bronze. Polymerization: Will not occur.

Hazardous decomposition Products : None known.

Section 11 - Toxicological Information

Routes of Entry : Absorbed through skin, Inhalation, Ingestion.
Toxicity to Animals : Acute oral toxicity (LD50): 273 mg/kg [Rat].

Chronic Effects on Humans:
MUTAGENIC EFFECTS : Mutagenic for mammalian somatic cells. May cause damage to the following organs: upper respiratory tract, skin, eyes.
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 Toxicity to Animals : Not available.

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.

Section 12 - 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.

Special Remarks on the Products of Biodegradation : Not available

Section 13 - Disposal Considerations

Waste Disposal : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14 - Transport Information

DOT/IATA/IMDG/IMO

Proper Shipping Name : Potassium Hydroxide, Solid
UN No : UN 1813
CAS No : 1310-58-3
EMS No : F-A, S-B
ERG No : 154

EAC	: 2R
IMDG-Packaging Group	: II
Marine Pollutant	: No
Class	: Class 8 – Corrosive substances
Packing Group	: II
Subsidiary Risks	: N.A./None
Label Required	: Corrosive (Class 8)

Additional Transport Information

Regulation	**Description**
DOT	Regulated as corrosive solid
IATA	Passenger and cargo aircraft restrictions apply
IMDG	Segregate away from acids and foodstuffs
IMO	Classified under corrosive substances

Transport Hazard Label : Class 8 – Corrosive

Section 15 -Regulatory Information

Federal and State Regulations

New York release reporting list	: Potassium hydroxide
Pennsylvania RTK	: Potassium hydroxide
Florida	: Potassium hydroxide
Minnesota	: Potassium hydroxide
Massachusetts RTK	: Potassium hydroxide
New Jersey	: Potassium hydroxide
California Director's List of Hazardous Substances	: Potassium hydroxide
TSCA 8(b) inventory	: Potassium hydroxide

CERCLA:
Hazardous substances. : Potassium hydroxide: 1000 lbs. (453.6kg)

Other Regulations:

OSHA : Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS : This product is on the European Inventory of Existing Commercial Chemical Substances. p. 6

Other Classifications:

WHMIS (Canada) : CLASS D-1B: Material causing immediate and serious

	toxic effects (TOXIC). CLASS E: Corrosive solid. DSCL (EEC):
HMIS (U.S.A.)	: Health Hazard: 3 Fire Hazard: 0 Reactivity: 2 Personal Protection: j
National Fire Protection Association (U.S.A.)	: Health: 3 Flammability: 0 Reactivity: 1
Specific hazard Protective Equipment	: Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16 - Other Information

Disclaimer :
This document is provided solely as a guideline for the safe handling of the material by trained and qualified personnel using this product. Users are responsible for evaluating the suitability of the information for their specific applications and conditions of use. Although the information and recommendations contained herein are believed to be accurate and reliable as of the date of issue, BTTCO GROUP makes no representations or warranties regarding their completeness or accuracy and assumes no liability for any loss, damage, or consequences resulting from reliance on this information.

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