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|  | **Gujarat Alkalies and Chemicals Ltd.**  **Vadodara** | | | | | | | | | | | |
| **SECTION 1: Product and Company Identification** | | | | | | | | | | | | |
| **Name** | | | | | **POTASSIUM HYDROXIDE SOLUTION** | | | | | | | |
| **Company** | | | | | M/s Gujarat Alkalies and chemicals limited,  P.O. Petrochemicals, Dist.: - Vadodara, Gujarat (India), Pin Code: 391346 | | | | | | | |
| **Synonyms** | | | | | Caustic Potash Lye | | | | | | | |
| **Emergency Contact Details** | | | | | Phone no. | | 09979897101, 09879604102 | | | | | |
| E-mail | | [headmarketing@gacl.co.in](mailto:headmarketing@gacl.co.in)  [ccr@gacl.co.in](mailto:ccr@gacl.co.in) | | | | | |
| **SECTION 2: Hazards Identification** | | | | | | | | | | | | |
| **Emergency Overview** | | | | | | | | | | | | |
|  | | | | | DANGER:  May be corrosive to metals  Harmful if swallowed  Causes severe skin burns and eye damage | | | | | | | |
| **Potential Health Effects** | | | | | | | | | | | | |
| **Inhalation** | | | | | Can cause severe respiratory irritation. Inhalation of mists or vapors may Produce upper airway edema, wheezing, pulmonary edema, pneumonitis and respiratory failure. | | | | | | | |
| **Skin** | | | | | Contact causes severe skin irritation and possible burns. | | | | | | | |
| **Eyes** | | | | | Causes severe eye burns. corrosive to the eyes and may cause severe damage including blindness. | | | | | | | |
| **Ingestion** | | | | | Ingestion may produce burns to the lips, oral cavity, upper airway,  Esophagus and possibly the digestive tract. Ingestion of this product may cause nausea, vomiting and diarrhea. | | | | | | | |
| **Disposal** | | | | | Dispose of contents/container to an approved waste disposal plant. | | | | | | | |
| **SECTION 3: Composition/information on ingredients** | | | | | | | | | | | | |
| **Component** | | | | | **CAS-No.** | | | | **EC-No.** | | | **Weight %** |
| Potassium Hydroxide Lye | | | | | 1310-58-3 | | | | 215-181-3 | | | ~ 30 – 50 % |
| Water | | | | | 7732-18-5 | | | | 231-791-2 | | | ~ 50 – 70 % |
| **SECTION 4: First Aid Measures** | | | | | | | | | | | | |
| **Inhalation** | | | | | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. | | | | | | | |
| **Skin** | | | | | Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician. | | | | | | | |
| **Eyes** | | | | | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. | | | | | | | |
| **Ingestion** | | | | | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. | | | | | | | |
| **Most important symptoms/effects** | | | | | Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation | | | | | | | |
| **Notes to Physician** | | | | | Treat symptomatically | | | | | | | |
| **SECTION 5: Fire Fighting Measures** | | | | | | | | | | | | |
| **Suitable Extinguishing Media** | | | | | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. | | | | | | | |
| **Flash Point** | | | | | Not Applicable | | | | | **Explosion Limits** | | |
| **Auto ignition Temperature** | | | | | No data available | | | | | **Upper** | | No data available |
|  | | | | |  | | | | | **Lower** | | No data available |
| **Hazardous Combustion Products** | | | | | Hazardous decomposition products formed under fire conditions. - Potassium oxides. | | | | | | | |
| **Specific Hazards Arising from the Chemical** | | | | | Potassium oxides. Keep product and empty container away from heat and sources of ignition. | | | | | | | |
| **NFPA: Health: 3 Flammability: 0 Reactivity: 0 Special hazards: NA** | | | | | | | | | | | | |
| **SECTION 6: Accidental Release Measures** | | | | | | | | | | | | |
| **Personal Precautions** | | | | | Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid contact with skin, eyes and inhalation of vapors. Do not use metal tools or equipment. | | | | | | | |
| **Environmental precautions** | | | | | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. | | | | | | | |
| **Methods and materials for containment and cleaning up** | | | | | Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. | | | | | | | |
| **SECTION 7: Handling and Storage** | | | | | | | | | | | | |
| **Handling** | | | | | Use only under a chemical fume hood. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. | | | | | | | |
| **Storage** | | | | | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Corrosives area. Do not store in metal containers. | | | | | | | |
| **SECTION 8: Exposure Controls/Personal Protection** | | | | | | | | | | | | |
| **Exposure Guidelines:** | | | | | | | | | | | | |
| **Component** | | | | | | **OSHA PEL** | | | | | **ACGIH TLV** | |
| Potassium Hydroxide | | | | | | Ceiling: 2 mg/m3 | | | | | Ceiling: 2 mg/m3 | |
| **Engineering Measures** | | | Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. | | | | | | | | | |
| **Personal Protective Equipment** | | | | | | | | | | | | |
| **Eye/face Protection** | | | Tightly fitting safety goggles. Face shield. Use equipment for eye protection tested and approved under appropriate government standards. | | | | | | | | | |
| **Skin and body protection** | | | Wear appropriate protective gloves and clothing to prevent skin exposure. Long sleeved clothing. | | | | | | | | | |
| **Respiratory Protection** | | | Where risk assessment shows air-purifying respirators are appropriate use or type respirator cartridges as a backup to engine protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards. | | | | | | | | | |
| **SECTION 9: Physical and Chemical Properties** | | | | | | | | | | | | |
| **Appearance** | | | Colorless Liquid | | | | | **Water solubility** | | | | Soluble in all proportions |
| **Odour** | | | Odorless | | | | | **Auto-ignition**  **temperature** | | | | No data available |
| **pH** | | | 12.0 (0.1M) | | | | | **Viscosity** | | | | 5.25 cSt @ 68°F / 20°C (50% solution) |
| **Melting point/freezing**  **point** | | | 39.2 °F (4 °C) (50% solution) | | | | | **Flammability (solid, gas)** | | | | No data available |
| **Initial boiling point and**  **boiling range** | | | 289.4 °F (143 °C) (50% solution) | | | | | **Decomposition**  **temperature** | | | | No data available |
| **Vapour pressure** | | | 27 mm Hg @ 60°C / 140°F (50% solution) | | | | | **Relative density** | | | | 1.32-1.50 |
| **Vapour density** | | | No data available | | | | | **Oxidizing properties** | | | | No data available |
| **SECTION 10: Stability and Reactivity** | | | | | | | | | | | | |
| **Reactive Hazard** | | | | No data available | | | | | | | | |
| **Stability** | | | | Stable under recommended storage conditions | | | | | | | | |
| **Conditions to Avoid** | | | | Incompatible products. | | | | | | | | |
| **Incompatible Materials** | | | | Acids, Halogens, Acid anhydrides, Metals | | | | | | | | |
| **Hazardous Decomposition Products** | | | | Hazardous decomposition products formed under fire conditions. - Potassium oxides | | | | | | | | |
| **Hazardous Polymerization** | | | | Hazardous polymerization does not occur. | | | | | | | | |
| **Hazardous Reactions** | | | | None under normal processing. | | | | | | | | |
| **SECTION 11: Toxicological Information** | | | | | | | | | | | | |
| **Acute toxicity** | | Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. | | | | | | | | | | |
| **Carcinogenicity** | | Not listed. | | | | | | | | | | |
| **SECTION 12: Ecological Information** | | | | | | | | | | | | |
| **Eco toxicity** | Do not allow material to contaminate ground water system. | | | | | | | | | | | |
| **Other** | Harmful to aquatic life. LC50: 80 mg/L, 96h static (Gambusia affinis) in fresh water. | | | | | | | | | | | |
| **SECTION 13: Disposal Considerations** | | | | | | | | | | | | |
| **Waste treatment methods** | | | | | | | | | | | | |
| **Waste** | | | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. | | | | | | | | | |
| **Contaminated packaging** | | | Dispose of as unused product. | | | | | | | | | |
| **SECTION 14: Transport Information** | | | | | | | | | | | | |
| **UN number** | | | | | 1814 | | | | | | | |
| **UN proper shipping name** | | | | | POTASSIUM HYDROXIDE SOLUTION | | | | | | | |
| **Transport hazard class** | | | | | 8 | | | | | | | |
| **Packaging group** | | | | | II | | | | | | | |
| **Environmental hazards** | | | | | IMDG Marine pollutant: no | | | | | | | |
| **SECTION 15: Regulatory Information** | | | | | | | | | | | | |
| **Safety, health and environmental regulations/legislation specific for the substance or mixture**  This safety datasheet complies with the requirements of Regulation.  **Chemical safety assessment**  A Chemical Safety Assessment has been carried out for this substance. | | | | | | | | | | | | |
| **SECTION 16: Other Information** | | | | | | | | | | | | |
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