

### MATERIAL SAFETY DATA SHEET

Point no. 1	Chemical product and company identification.
Chemical product	Potassium Hydroxide Flakes
Synonyms	Caustic potash flakes
Name of Manufacturing Company	M/s. Gujarat Alkalies & Chemicals Limited. P.O. Petrochemicals, Dist. Vadodara Pin code no. 391 346 State – Gujarat, INDIA Telephone No. 2232681, 2232981 –82, 2232039 Fax No. 2232130
Point No. 2	Composition, Information on ingredients KOH, Potassium Hydroxide, solid In-organic alkali
Point No. 3	Hazardous Identification Corrosive, Class – 8 U.N. No. 1813 Hazchem No. 2 R CAS No. 1310- 58-3 EINECS/ELINCS–215-181-3
Point No. 4	First Aid Measure Ingestion :- Do not induce vomiting. Give plenty of water and milk to drink. Eyes : Flush with lot of water for 15 minutes. Skin : Remove wetted clothes, flush affected area with plenty of water and rinse with dilute vinegar solution. Inhalation :- Remove the victim to fresh air area, seek medical help.
Point No. 5	Fire Fighting Measure Non flammable - Special procedures keep containers cool by spraying water if exposed to heat or flame.
Point No. 6	Accidental Release Measures Sweep and collect without making dust, wash the place with water.
Point No. 7	Handling and storage Keep the containers tightly closed and away from moisture and metals.
Point No. 8	Exposure controls, Personal Protection Avoid contact with liquid, solid, vapors or dust, provide close fitting, safety goggles/face shield, respirator for dust, long sleeves cotton jacket, rubber shoes and rubber apron.
Point No. 9	Physical and chemical properties boiling range/point 1320 <sup>0</sup> C, physical stage ; solid, appearance : white crystal Melting/Freezing point 360 <sup>0</sup> C, vapour pressure at 35 <sup>0</sup> C – not available, odour :- odourless vapour density (air = 1) :- not pertinent, solubility :- soluble in water at 30 <sup>0</sup> C, others :- soluble in alcohol glycerol, density :- 2.04 gm/1 pH >8
Point No. 10	Stability and Reactivity Stability :- flammability “NO” LEL - not pertinent, flash point – not pertinent, auto

	<p>ignition temp <sup>0</sup>C – Not pertinent, TDG flammability – NA, UEL : Not pertinent, flash point <sup>0</sup>C – not pertinent Explosion sensitivity of impact – stable, Explosion sensitivity to static electricity – stable, Hazardous combustion products – Emits – toxic fumes of K<sub>2</sub>O, Hazardous polymerization – will not occur. Combustible liquid – NO, Flammable material – NO, Oxidizer – NO, others – NIL, Pyrophoric material – NO, Organic Peroxide – NO.</p> <p>Reactivity :- Chemical stability – stable, incompatibility with other material – when wet attacks- metals such as aluminum, Tin , lead and Zinc. Reactivity – violent exothermic reaction with water, potentially explosive reaction with bromoform + crown ethers, chlorine dioxide, Nitro Methane. Hazardous reaction products – reacts with ammonium hexa Chloro platinate (2) + heat, to form heat, sensitive explosive product.</p>																																		
Point No. 11	<p>Toxicological information  TLV (ACGIH) 2 ppm (ceiling) Nil mg/m<sup>3</sup>, STEL – not listed, PPM – not listed mg/m<sup>3</sup>, permissible exposure limited ppm- not listed. LD - 50 – 365 mg/Kg NFPA Hazard- signate, health – 3, flammability Nil, reactivity – 1, special -----</p>																																		
Point No. 12	<p>Ecological information  Ecotoxicity : fish : mosquito fish : LC 50 = 80.0 mg/l, 24 hours; unspecified no data available.  Environment :- No information found  Physical :- No information found.  Other :- No information available.</p>																																		
Point No. 13	<p>Disposal Consideration  Seal all waste in vapour tight plastic bags for eventual disposal. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification on determination are listed in 40 CFR parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  RCRA P – series :- Non listed.  PCPA U – series :- Non listed.</p>																																		
Point No. 14	<p>Transport information :-</p> <table border="1"> <thead> <tr> <th></th> <th>US DOT</th> <th>IATA</th> <th>RID/ADR</th> <th>IMO</th> <th>Canada TDG</th> </tr> </thead> <tbody> <tr> <td>Shipping name</td> <td>Potassium Hydroxide solid</td> <td></td> <td></td> <td></td> <td>Potassium Hydroxide</td> </tr> <tr> <td>Hazard class</td> <td>8</td> <td></td> <td></td> <td></td> <td>8 (9.2)</td> </tr> <tr> <td>UN Number</td> <td>UN 1813</td> <td></td> <td></td> <td></td> <td>UN 1813</td> </tr> <tr> <td>Packing group</td> <td>II</td> <td></td> <td></td> <td></td> <td>II</td> </tr> </tbody> </table>						US DOT	IATA	RID/ADR	IMO	Canada TDG	Shipping name	Potassium Hydroxide solid				Potassium Hydroxide	Hazard class	8				8 (9.2)	UN Number	UN 1813				UN 1813	Packing group	II				II
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Point No. 15	<p>Regulatory information :-</p>																																		
EC label/EC number	<p>TSCA :- CAS # 1310-58 is listed on the TSCA inventory.</p>																																		
EC label name	<p>(i) Potassium Hydroxide Flakes (ii) synonyms :- Caustic potash flakes</p>																																		

EC classification	<p>Clean air Act :- This material does not contain any hazardous air pollutants. This material does not contain any class 1 Ozone – depletors. This material does not contain any class 2 Ozone depletors.</p> <p>Clean water Act :- CAS # 1310-58-3 is listed as a hazardous substance under the CWA. None of the chemicals in this product are listed as priority pollutants under the CWA.</p> <p>OSHA :- None of the chemicals in this product are considered highly hazardous by OSHA.</p>
EC symbols :-	Hazards symbols – C
EC Risk phrases	R 22 harmful if swallowed.
EC safety phrases	S 26 in case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

State :-	<p>S 36/37/39 wear suitable protective clothing, gloves and eye/face – protection.  S 45 in case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)</p>
European/ international regulations	<p>CAS # 1310 – 583 can be found on the following state right to know lists : California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. California. No significant risk level. None of the chemicals in this product are listed.  European labeling in accordance with EC directives hazard symbols : “C”.</p>
Point No. 16	<p><b>Other Information</b>  Information contained in this material data sheet is believed to be reliable but no representation. Guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to the manufacture/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufacture handled or sold by him as the case may be. The Government makes no warranties, expressed or implied, in respect of the adequacy of this document for any particular purpose.</p>