



15185 Main Street  
Lemont, IL 60439

# Material Safety Data Sheet

## Sodium Hydroxide Solution

(Liquid Caustic Soda – all grades)

1. Product & Company Identification	3. Composition / Ingredients												
<p>Product Name: Sodium Hydroxide Solution            Synonym: 50 % Caustic Soda - Liquid            Chemical Formula: NaOH            Distributor: KA Steel Chemicals Inc.                              15185 Main Street                              Lemont, IL 60439                              630-257-3900            Revision Date: April 14, 2009            CAS #: 1310-73-2            Emergency Numbers: CHEMTREC 1-800-424-9300            Product Information: KA Steel Chemicals 800-677-8335</p>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>COMPONENT</u></th> <th style="text-align: left;"><u>CAS#</u></th> <th style="text-align: left;"><u>CONCENTRATION</u></th> </tr> </thead> <tbody> <tr> <td>Sodium Hydroxide</td> <td>1310-73-2</td> <td>Approx. 50%</td> </tr> <tr> <td>Sodium Chloride</td> <td>7647-14-5</td> <td>&lt; 1 %</td> </tr> <tr> <td>Water</td> <td>7732-18-5</td> <td>Balance</td> </tr> </tbody> </table> <div style="border: 1px solid red; padding: 5px; margin-top: 10px; color: red; text-align: center;"> <p><b>Distributed By:</b>  <b>SAL Chemical</b>  <b>304-748-8200</b></p> </div>	<u>COMPONENT</u>	<u>CAS#</u>	<u>CONCENTRATION</u>	Sodium Hydroxide	1310-73-2	Approx. 50%	Sodium Chloride	7647-14-5	< 1 %	Water	7732-18-5	Balance
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Sodium Hydroxide	1310-73-2	Approx. 50%											
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Water	7732-18-5	Balance											
2. Hazard Identification	4. First Aid Measures												
<p><b>DANGER – VERY CORROSIVE LIQUID</b></p> <p>Is chemical listed as a carcinogen or potential carcinogen? NTP- NO IARC – NO OSHA – NO</p> <p><b><u>POTENTIAL HEALTH EFFECTS</u></b></p> <p><b>Primary routes of exposure:</b> Skin and eyes contact, inhalation, ingestion.</p> <p><b>Inhalation:</b> Breathing of mist may cause irritation of upper respiratory tract.</p> <p><b>Ingestion:</b> Ingestion of caustic soda liquid can cause perforation of the esophagus and stomach. Abdominal pain, nausea, vomiting and general gastro-intestinal upset can be expected.</p> <p><b>Skin Contact:</b> May cause severe chemical burns and tissue destruction.</p> <p><b>Eye Contact:</b> May cause severe and possible permanent damage.</p>	<p><b>Inhalation:</b> Move person to fresh air. If breathing is difficult, give oxygen. Call a physician.</p> <p><b>Eye contact:</b> Immediately flush eyes with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Hold eyelids open during this flushing with water. Do not attempt to neutralize with acidic solutions. Seek medical attention immediately, preferably from an Ophthalmologist.</p> <p><b>Ingestion:</b> If swallowed, give at least 3-4 glasses of water or milk. Do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention.</p> <p><b>Skin Contact:</b> Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. If skin feels slippery, caustic may still be present in sufficient quantities to cause rash or burn. Continue washing skin until slick feeling is gone. Do not apply oils or ointment unless ordered by the physician. Discard footwear which cannot be decontaminated. Discard leather articles such as shoes and belt.</p>												



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<p><b>5. Fire Fighting Information</b></p> <p><b>Fire:</b> Not Flammable. May react with some metals (ex. Aluminum, zinc, tin) to release flammable Hydrogen Gas.</p> <p><b>Fire Extinguishing Media:</b> Use extinguishing agents appropriate for surrounding fire.</p>	<p><b>8. Exposure Controls / Personal Protection</b> cont.</p> <p><b>PPE Requirement:</b> Should be based upon a hazard assessment. Recommendation for areas with splash potential:</p> <p><b>Skin Protection Requirements:</b> Wear impervious protective clothing; including boots; gloves; lab coat; apron or coveralls to prevent skin contact. Preferred Materials: Nitrile, Neoprene, PVC.</p> <p><b>Eye Protection Requirements:</b> Use chemical safety goggles and face shield impervious to product.</p> <p>NOTE: ALL PROTECTIVE EQUIPMENT MUST CONFORM WITH 29 CFR 1910.132.</p>
<p><b>6. Accidental Release Measures</b></p> <p>Steps to be taken if material is spilled or released: Dike area to contain spill. Only trained and properly protected personnel should be involved in response actions. Reclaim and reuse spilled material if possible. Upon drying, it will leave a white residue if not neutralized and flushed down adequately. See Section 13 for disposal considerations.</p>	<p><b>9. Physical &amp; Chemical Properties</b></p> <p><b>Appearance:</b> Colorless to slightly grey solution</p> <p><b>Vapor Pressure:</b> 1.5 mm Hg. @ 68° F ( 20° C)</p> <p><b>Specific Gravity:</b> 1.53 @ 60° F</p> <p><b>Density:</b> 12.76 lbs/gal @ 60° F</p> <p><b>Heat of Solution:</b> Exothermic</p> <p><b>Odor:</b> Virtually Odorless</p> <p><b>Boiling Point:</b> 288° F (142° C)</p> <p><b>Freeze Point:</b> About 56° F</p> <p><b>Solubility:</b> Complete in water</p> <p><b>pH of Solutions:</b> Strongly Basic (14)</p>
<p><b>7. Handling &amp; Storage</b></p> <p>Store and handle above freezing point only in containers suitably lined with or constructed of materials specified for this product. Keep separate from incompatibles. Vent tank away from work areas. Avoid mist or dust formation. Mixing with water will generate significant heat. Label all tanks, pipelines and offload connections.</p>	
<p><b>8. Exposure Controls / Personal Protection</b></p> <p><b>Ventilation Requirements:</b> Local exhaust - to meet the exposure requirements and avoid creating mist or dust formation.</p> <p><b>Personal Respirators: ( NIOSH Approved ) -</b> Dust/mist respirators recommended for all personnel working in or about an area of potential mist exposure.</p> <p><b>Exposure Limits -</b>     <u>OSHA PEL</u>     <u>ACGIH ceiling</u>    2mg / m<sup>3</sup>     2mg / m<sup>3</sup></p>	



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<p><b>10. Exposure Controls/ Personal Protection</b></p>	<p><b>15. Regulatory Information</b></p>
<p><b>Stability:</b> Stable under ordinary conditions of use and storage.  <b>Hazardous Decomposition Products:</b> Reaction with various food sugars may form carbon monoxide.  <b>Hazardous Polymerization:</b> This substance does not polymerize.  <b>Incompatibility: (Materials to Avoid):</b> May react violently with water, acids and a number of organic compounds. Reacts rapidly with aluminum, tin and zinc. Also reacts with bronze and brass.</p>	<p><b>TSCA:</b> Sodium Hydroxide is on the TSCA inventory under CAS. NO.1310-73-2.  <b>OSHA:</b> Listed as a “Hazardous Chemical” as defined in CFR 1910.1200 (Hazcom).  <b>EUROPE EINECS:</b> This product is listed on EINECS.  <b>CANADA DSL:</b> This product is listed on the Canadian DSL.  <b>AUSTRALIA AIC:</b> This product is listed on AICS  <b>KOREA ECL:</b> This product is listed on KECL.  <b>JAPAN MITI ( ENCS):</b> This product is listed on ENCS.  <b>CANADIAN REGULATIONS (WHMIS) – Class E Corrosive material</b>  <b>SARA TITLE III: SARA ( 311,312) HAZARD CLASS:</b> Acute Health.  <b>SARA ( 313) CHEMICALS:</b> Not Listed  <b>SARA Section 302:</b> Not listed as an Extremely Hazardous Substance</p>
<p><b>11. Toxicological Information</b></p>	<p><b>16. Other Information</b></p>
<p>Sodium Hydroxide – Acute Toxicity          Oral – LD 50:140-340 mg / kg (Rat)          Dermal- LD 50: 1350 mg / kg ( Rabbit)</p>	<p><b>NFPA / HMIS Ratings:</b>          Health – 3 Flammability – 0 Reactivity -1</p>
<p><b>12. Ecological Information</b></p>	<p>The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, K.A. Steel Chemicals, Inc. makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, K.A. Steel Chemicals will not be responsible for damages of any kind resulting from the use of or reliance upon such information. No representation, or warranties, either express or implied, of merchantability fitness for a particular purpose or of any nature are made hereunder with respect to the with respect to the product to which the information refers.</p>
<p>Material is moderately toxic to aquatic organisms on an acute basis. May increase pH of aquatic systems which may be toxic.</p>	
<p><b>13. Disposal Consideration</b></p>	
<p><b>DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.</b> Reuse or reprocess if possible. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterization and compliance with applicable laws are the responsibility solely of the waste generator.</p>	
<p><b>14. Department of Transportation Information</b></p>	
<p><b>Name:</b> Sodium Hydroxide Solution  <b>Hazard Classification:</b> 8  <b>Identification Number:</b> UN 1824  <b>Packing Group:</b> II  <b>Label Required:</b> CORROSIVE  <b>Reportable Quantity:</b> 2,000 Lbs (50% Caustic solution)</p>	