

**MATERIAL SAFETY DATA SHEET****Caustic Soda Lye (CSL)**

|                   |  |
|-------------------|--|
| <b>MSDS Name:</b> | Caustic Soda Lye (CSL), 50 wt% solution in water |
| <b>Synonyms:</b>  | Caustic Soda Lye (CSL)                           |

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|--|--|
| <b>Company Identification:</b>             | Hazel Mercantile Limited                               |
| <b>Company Identification: (INDIA)</b>     | 701, Embassy Centre , Nariman Point , Mumbai – 400 021 |
| <b>For information in the INDIA, call:</b> | +91-22-2282 4444 (50 Lines)                            |

**Section 2 - Composition, Information on Ingredients**

| CAS#      | Chemical Name:         | %  | EINECS#   | Hazard Symbols: | Risk Phrases: |
|-----------|------------------------|----|-----------|-----------------|---------------|
| 1310-73-2 | Caustic Soda Lye (CSL) | 50 | 215-185-5 | C               | 35            |
| 7732-18-5 | Water                  | 50 | 231-791-2 |                 |               |

Text for R-phrases: see Section 16

|  |    |
|--|----|
| <b>Hazard Symbols:</b>   | C  |
|  |    |
| <b>Risk Phrases:</b>   | 35 |

**Section 3 - Hazards Identification****EMERGENCY OVERVIEW***Causes severe burns.***Potential Health Effects**

|                    |   |
|--------------------|---|
| <b>Eye:</b>        | Causes severe eye burns.  |
| <b>Skin:</b>       | Causes skin burns. May cause deep, penetrating ulcers of the skin.  |
| <b>Ingestion:</b>  | Causes gastrointestinal tract burns. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.  |
| <b>Inhalation:</b> | Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Causes chemical burns to the respiratory tract. |
| <b>Chronic:</b>    | Prolonged or repeated skin contact may cause dermatitis.  |

**Section 4 - First Aid Measures**

|                            |   |
|----------------------------|---|
| <b>Eyes:</b>               | Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.   |
| <b>Skin:</b>               | Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. |
| <b>Ingestion:</b>          | Do not induce vomiting. Get medical aid immediately.  |
| <b>Inhalation:</b>         | Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.   |
| <b>Notes to Physician:</b> | Treat symptomatically and supportively.   |



### Section 5 - Fire Fighting Measures

|                             |   |
|-----------------------------|---|
| <b>General Information:</b> | As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. May react with metals and lead to the formation of flammable hydrogen gas. |
| <b>Extinguishing Media:</b> | Use foam, dry chemical, or carbon dioxide.  |

### Section 6 - Accidental Release Measures

|                             |   |
|-----------------------------|---|
| <b>General Information:</b> | Use proper personal protective equipment as indicated in Section 8.                                   |
| <b>Spills/Leaks:</b>        | Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. |

### Section 7 - Handling and Storage

|                  |   |
|------------------|---|
| <b>Handling:</b> | Wash thoroughly after handling. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood. |
| <b>Storage:</b>  | Store in a cool, dry place. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Store under an inert atmosphere.  |

### Section 8 - Exposure Controls, Personal Protection

|                              |   |
|------------------------------|---|
| <b>Engineering Controls:</b> | Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.     |
| <b>Exposure Limits</b>       | CAS# 1310-73-2:<br>United Kingdom, WEL - STEL: 2 mg/m3 STEL<br>United States OSHA: 2 mg/m3 TWA<br>Belgium - TWA: 2 mg/m3 VLE<br>France - VME: 2 mg/m3 VME<br>Germany: 2 mg/m3 TWA (inhalable fraction)<br>Japan: 2 mg/m3 Ceiling<br>Malaysia: 2 mg/m3 Ceiling<br>Spain: 2 mg/m3 VLA-EC<br>CAS# 7732-18-5: |

### Personal Protective Equipment

|                     |   |
|---------------------|---|
| <b>Eyes:</b>        | Wear chemical splash goggles.   |
| <b>Skin:</b>        | Wear appropriate protective gloves to prevent skin exposure.  |
| <b>Clothing:</b>    | Wear appropriate protective clothing to prevent skin exposure.  |
| <b>Respirators:</b> | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |



### Section 9 - Physical and Chemical Properties

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>Physical State:</b>            | Viscous liquid        |
| <b>Color:</b>                     | clear colorless       |
| <b>Odor:</b>                      | Not available         |
| <b>pH:</b>                        | >13                   |
| <b>Vapor Pressure:</b>            | Not available         |
| <b>Viscosity:</b>                 | Not available         |
| <b>Boiling Point:</b>             | 145 deg C ( 293.00°F) |
| <b>Freezing/Melting Point:</b>    | 12 deg C ( 53.60°F)   |
| <b>Autoignition Temperature:</b>  | Not available         |
| <b>Flash Point:</b>               | Not available         |
| <b>Explosion Limits: Lower:</b>   | Not available         |
| <b>Explosion Limits: Upper:</b>   | Not available         |
| <b>Decomposition Temperature:</b> | Not available         |
| <b>Solubility in water:</b>       | Soluble               |
| <b>Specific Gravity/Density:</b>  | 0.935                 |
| <b>Molecular Formula:</b>         | NaOH                  |
| <b>Molecular Weight:</b>          | 40                    |

### Section 10 - Stability and Reactivity

|   |  |
|---|--|
| <b>Chemical Stability:</b>                    | Stable at room temperature in closed containers under normal storage and handling conditions. Absorbs carbon dioxide from the air. |
| <b>Conditions to Avoid:</b>                   | Incompatible materials, exposure to air.   |
| <b>Incompatibilities with Other Materials</b> | Water, acids, aluminum, chlorinated solvents, copper, copper alloys, magnesium, phosphorus, zinc, tin, organic materials.          |
| <b>Hazardous Decomposition Products</b>       | Sodium oxide.  |
| <b>Hazardous Polymerization</b>               | Will not occur.  |

### Section 11 - Toxicological Information

|                         |   |
|-------------------------|---|
| <b>RTECS#:</b>          | CAS# 1310-73-2: WB4900000<br>CAS# 7732-18-5: ZC0110000  |
| <b>LD50/LC50:</b>       | RTECS:<br><b>CAS# 1310-73-2:</b> Draize test, rabbit, eye: 400 ug Mild;<br>Draize test, rabbit, eye: 1% Severe;<br>Draize test, rabbit, eye: 50 ug/24H Severe;<br>Draize test, rabbit, eye: 1 mg/24H Severe;<br>Draize test, rabbit, skin: 500 mg/24H Severe;<br>RTECS: <b>CAS# 7732-18-5:</b> Oral, rat: LD50 = >90 mL/kg;<br>Other: |
| <b>Carcinogenicity:</b> | Sodium hydroxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.<br>Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.   |
| <b>Other:</b>           | See actual entry in RTECS for complete information.   |

### Section 12 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.



### Section 13 - Transport Information

|                       | IATA                      | IMO                       | RID/ADR                   |
|-----------------------|---------------------------|---------------------------|---------------------------|
| <b>Shipping Name:</b> | SODIUM HYDROXIDE SOLUTION | SODIUM HYDROXIDE SOLUTION | SODIUM HYDROXIDE SOLUTION |
| <b>Hazard Class:</b>  | 8                         | 8                         | 8                         |
| <b>UN Number:</b>     | 1824                      | 1824                      | 1824                      |
| <b>Packing Group:</b> | II                        | II                        | II                        |

USA RQ: CAS# 1310-73-2: 1000 lb final RQ; 454 kg final RQ

### Section 14 - Regulatory Information

| European/International Regulations   |
|--|
| European Labeling in Accordance with EC Directives   |
| Hazard Symbols: C  |
| <b>Risk Phrases:</b>   |
| ➤ R 35 Causes severe burns.  |
| <b>Safety Phrases:</b>   |
| ➤ S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.               |
| ➤ S 37/39 Wear suitable 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). |
| <b>WGK (Water Danger/Protection)</b>   |
| ➤ CAS# 1310-73-2: 1  |
| ➤ CAS# 7732-18-5: Not available  |
| <b>Canada</b>  |
| ➤ CAS# 1310-73-2 is listed on Canada's DSL List  |
| ➤ CAS# 7732-18-5 is listed on Canada's DSL List  |
| <b>US Federal</b>  |
| ➤ TSCA   |
| ➤ CAS# 1310-73-2 is listed on the TSCA Inventory.  |
| ➤ CAS# 7732-18-5 is listed on the TSCA Inventory.  |

### Section 15 - Other Information

| Text for R-phrases from Section 2 |
|-----------------------------------|
| ➤ R 35 causes severe burns.       |

  

|                            |            |
|----------------------------|------------|
| <b>MSDS Creation Date:</b> | 08/16/2007 |
| <b>Revision #1 Date</b>    |            |

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