

# Caustic Soda Lye

Physical Properties	
Appearance	Colourless viscous liquid.
Boiling point	142- 148°C
Fusion Point	12- 15 °C
Specific Gravity	1.52 at 20°C
Physical state	Lye
Solubility in water	Complete
pH	14
Odour	Odour less
Others	Soluble in alcohol, methanol, and glycerol

Chemical Identity	
Formula: NaOH	CAS No. 1310-73-2
Molecular Weight: 40	Codes/Label-corrosive, Class-8
UN No. 1823/1824	2R

Specifications	
NaOH	47.0 % (min)
Na <sub>2</sub> CO <sub>3</sub>	0.2 % (max)
NaCl	200 ppm (max)
Iron as Fe	5 PPM (max)
Sulphate as Na <sub>2</sub> SO <sub>4</sub>	0.1% (max)
Silicate as SiO <sub>2</sub>	3 ppm (max)
Copper (Cu)	2.0 PPM (max)
Manganese (Mn)	1.0 PPM (max)
Chlorate & per chlorate as NaClO <sub>3</sub>	10 PPM (max)
Water Insoluble matter	0.05 PPM (max)

Toxicity	
Permissible Exposure Limit	2 (Ceiling) Mg/m <sup>3</sup>
TLV (ACGIH)	2 (Ceiling) Mg/m <sup>3</sup>

## Applications

Caustic Soda is used in:

- Pulp and paper (in digestion process for the extraction of Chlorlignin of wood and pulp.)
- Aluminum (for the extraction of Alumina from Bauxite.)
- Soap (in soapanification reaction.)
- Detergent (in the process of neutralizing LAB.)
- Petroleum Refining (for naturalizing H<sub>2</sub>S in light distillates.)

- Rayon (in viscous section for the extraction of cellulose from the pulp.)
- Power Plants (in anionic resin regeneration in D.M. Plant.)
- Pharmaceuticals (in Paracetamol, Analgin, Ranitidine, Ibuprofen, Ciproflaxacin etc.)
- Textiles (In finishing operations at mercerizing & bleaching Stages).

### **Packaging**

Caustic Soda Lye	M.S.R.L./M.S. Road tankers & MS Rail Wagons.
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### **Safety / Precaution**

Use face shield, PVC Glove, PVC aprons, Gumboots, Safety goggles, provide good ventilation, use dust mask, avoid pipetting by mouth, don't eat or drink.

### **First Aid Measures**

Flush with a safety shower and remove contaminated clothes while taking shower, flush with water for a minimum of 15 minutes. On swallowing, drink large quantities of water & report to first aid center.

### **Other Details**

ITC Classification: 28151101

UN No. 1823

IMO Classification: 8 – Corrosive Substance