



## SECTION I: MATERIAL IDENTIFICATION &amp; USE: CAUSTIC SODA, SODA LYE 50% SOLN

Material CAUSTIC SODA  
 Name/Identifier CAUSTIC SODA/SODIUM HYDROXIDE

Manufacturer's Name	CENTURY CHEMICALS	Supplier's Name	CENTURY CHEMICALS
Street Address	MURBAD ROAD	Street Address	MURBAD ROAD
City	SHAHAD (Dist Thane)	City	SHAHAD (Dist Thane)
State	MAHARASHTRA	State	MAHARASHTRA
Postal Code	421 103.	Postal Code	421 103.
Emergency Tel No	0251-2733670-79	Emergency Code	0251-2733670-79
	Ulhasnagar		Ulhasnagar

Chemical Name SODIUM HYDROXIDE Chemical Identity NaoH, 50% LYE

Trade Name & Synonyms CAUSTIC SODA Product Use In Soap & Paper industry  
 In manufacturer of rayon yarn, tyre yarn

## SECTION II : HAZAROUS INGREDIENTS OF MATERIAL

Hazarous Ingredients	Approximate Conc. %	CAS or UN Number	LD 50 (Specify Species & route)	LC 50 (Specify Species & Route)
Caustic Soda	Minimum 50% Known as Soda lime	UN Number 1824	-	Chemical burns on Skin

## SECTION III : PHYSICAL DATA FOR MATERIAL

Physical State Gas/Liquid/Solid SOLID/LIQUID	Odour & Appearance Ordourless	Odour Threshold (ppm) 2 mg/m <sup>3</sup> - C
Specific Gravity 1.53 - Variable with Conc.	Vapour Pressure (mm) -	Vapour density (Air - 1) -
Evaporation rate -	Boiling Point (°C) 142-148°C	Freezing Point (°C) Crystallisation 12-15°C Solidification 5°C
Solubility in water (20°C) - Soluble in Water to form soapy solution	PH 7-14 depends on conc	Density (g/ml) Variable with concentration
Coefficient of water/oil distribution Forms soapy solution and with oil, soap is formed		



**SECTION IV : FIRE AND EXPLOSION HAZARD OF MATERIAL**

Flammability - Yes/No	Means of Extinction	Special Procedures
Flash Point (°C) & method	Upper Explosive limit (% by vol):-	Lower Explosive limit (% by vol) :-
Auto-ignition temp (°C)	TDG flammability Class 2 UN No 1824	Hazardous combustion Product Generates hydrogen with metal such as Tin, Zinc
Explosion data Sensitivity to Chemical impact		Sensitivity to static discharge - Explosion due to hydrogen forming with reaction of metals.

**SECTION V : REACTIVITY DATA**

Chemical stability - Yes/No info, under what condition	Yes
Incompatibility with other substances - Yes/No. If Yes, which ones	Incompatible with aluminium, tin, zinc as it generates explosive hydrogen gas. Avoid storage with trichloroethylene.
Reactivity and under what conditions	Reacts with metals as stated above
Hazardous decomposition Products	Liberates Hydrogen gas above
Material - Name/ Identifier	Caustic Soda/NaOH

**SECTION VI : TOXICOLOGICAL PROPERTIES OF MATERIAL (Route of Entry)**

Skin Control Causes Severe burns	Skin absorption Destruction of tissue	Eye Control Causes severe damage. Wash with plenty of water for 15-20 minutes
Inhalation acute Causes stinging Sensation in nose	Inhalation chronic Damage to nose tissue	Ingestion Causes severe injury to throat.

Effects of acute exposure to material : Causes severe burns on skin and eye tissue and throat.

<u>Effects of chronic exposure to material</u> Burns of chemical are severe and material penetrates deep into the body tissue.	Exposure limit (S) $2 \text{ mg/m}^3 - \text{C}$	Irritancy of material Damages the body tissue & nose
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SENSITIZATION TO MATERIAL : (Carcinogenically, Reproductive Effects, Tetragenicity, Mutagenicity) Carcinogenically.



**SYNERGISTIC MATERIALS :**

1) Severe damages to body tissue, (2) In contact with trichloroethylene, it forms flammable dichloroethylene.

**SECTION VII : PREVENTIVE MEASURES**

- 1 Safety showers and eye fountains to be provided
- 2 Drink large quantity of water if swallowed
- 3 Drench affected parts like skin, eyes with plenty of water for 15 minutes
- 4 Transport victim to hospital
- 5 In contact with thrichloroethylene, it forms flammable dichloroethylene. Hence storage with this chemical is to be avoided.

**PERSONAL PROTECTIVE EQUIPMENT**

Gloves (Specify)	PVC/rubber gloves
Respiratory (Specify)	Use dust mask or canister
Eyes (Specify)	Face shield made of acrylic sheet. Use safety goggles
Footwear (Specify)	Gumboot - PVC/rubber
Clothing (Specify)	PVC overall suit
Others (Specify)	-

**ENGINEERING CONTROLS** (e.g., Ventilation, enclosed process etc) Please specify

<u>Leak &amp; Spill Procedures</u>	<u>Waste Disposal</u>
Use Water to wash off leaks and spills, i.e., dilution	Flush contaminated area with plenty of water.
<u>Handling Procedures &amp; Eqpt</u>	<u>Storage requirements</u>
Liquid Caustic Soda in mild steel pipelines and solid caustic soda in sealed containers	Store in well sealed containers keep away from concentrated acid. Liquid caustic soda can be stored in MS Tanks.

**SPECIAL SHIPPING INFORMATION**

UN No 1824, Class 8 corrosives HAZCHEM Symbol : 2 R (R - full body protection).  
Symbol (liquids, spilling from 2 glass vessels and attacking a hand and a metal): Black background: Upper half white, lower half black with white border.

**SECTION VIII : FIRST AID MEASURES****FIRST AID MEASURES**

- 1 Rush to safety showers and remove the contaminated clothes and flush the victim for 15 minutes.
- 2 Drink large quantities of water if swallowed
- 3 Wash eyes for atleast 15 minutes if eyes are affected
- 4 Wash affected skin area for 15 minutes
- 5 Do not apply any ointment
- 6 Take the patient to hospital

SOURCES USED

- 1 IS 252 - 1962 Specification of caustic soda, technical (revised)
- 2 Chemical Safety Information Sheets of ICMA Association, Bombay.
- 3 Transportation of Dangerous goods - United Nations- New York.

ADDITIONAL INFORMATION

- 1 Safety showers, eye fountain must be provided in caustic handling area
- 2 Can evolve flammable hydrogen in contact with metals.

SECTION IX : DATE OF PREPARATION OF MATERIAL SAFETY DATA SHEET

Prepared by Safety Dept, Century Rayon, KALYAN, Tel No 0251-2733670-79, Ulhasnagar

Date :

NOTES

- 1 CAS or UN Number - Chemical Abstract Service or United Nations (UN) Number.
- 2 LD 50 - Lethal dose 50 (LD 50 - Specify species & route)
- 3 LC 50 - Lethal concentration 50% (LC 50 - Specify species & route)
- 4 TDG flammability - Transport of Dangerous Goods Flammability classification by United Nations.

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