

MATERIAL SAFETY DATA SHEET**SODIUM HYDROXIDE****SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION**

Supplier	:	DCM Shriram Ltd. (Unit: Shriram Alkali & Chemicals) 749, GIDC, Jhagadia-393110, Dist- Bharuch, Gujarat. Phone No: (+91 2645)226021/23 Fax No: (+91 2645)226037
Substance	:	Sodium Hydroxide
Trade Name/Synonyms	:	Caustic soda Lye /Flakes
CAS number	:	1310-73-2
Application	:	It is used in many industries, mostly as a strong chemical base in the manufacture of pulp and paper, textiles, drinking water, soaps and detergents and as a drain cleaner.

SECTION 2: HAZARDS IDENTIFICATION**HAZARD PICTOGRAM:****NFPA RATING:**

Health Rating	:	3 - Severe (Poison)
Flammability Rating	:	0 - None
Reactivity Rating	:	1 - Low
Special	:	None

RISK PHRASES:

35 : Causes severe burns.

SAFETY PHRASES:

1/2 : Keep locked up and out of the reach of children.

26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37/39 : Wear suitable gloves and eye/face protection.

45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

Component Substance	:	Sodium hydroxide
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Component Percent : 47 – 50 % by weight (Lye), Min. 97 % by weight (Flakes)
CAS Registry Number : 1310-73-2

SECTION 4: FIRST AID MEASURES

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.

Ingestion:

DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

SECTION 5: FIRE FIGHTING MEASURES

Fire: Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not get water on spilled substances or inside containers.

SECTION 7: HANDLING AND STORAGE

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Always add the caustic to water while stirring; never the reverse. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation System:

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A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Respirators:

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	Liquid / solid
Appearance	:	Colorless liquid / White coloured solid
Odour	:	odourless
Solubility	:	111 g/100 g of water.
Specific Gravity	:	2.13
pH	:	13 - 14 (0.5% soln.)
Boiling Point	:	1390°C
Solidifies at	:	05°C
Melting Point	:	318° C
Vapour Density (Air=1)	:	> 1.0
Vapor Pressure (mm Hg)	:	Negligible.
LEL	:	Not applicable
UEL	:	Not applicable
Flash Point	:	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Moisture, contact with water, exposure to moist air or water, prolonged exposure to air.

Incompatibilities with Other Materials: Acids, water, flammable liquids, organic halogens, metals, aluminum, zinc, tin, leather, wool, nitro methane.

Hazardous Decomposition Products: Toxic fumes of sodium oxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Data	:	LD 50 – 2000 mg/kg (rat)
STEL	:	Not listed

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SECTION 12: ECOLOGICAL INFORMATION

Ecological Overview

Toxicity to fishes : 40 mg/l

Toxicity to bacteria : Not listed

Harmful to aquatic animals, so do not discharge into drains.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: TRANSPORT INFORMATION

Shipping Name : Sodium Hydroxide
 UN No. : 1823/1824
 Hazard Class : Class 8-Corrosive
 Hazardous waste Id No. : 16
 Hazchem Code : 2 R
 Packaging : Lye in tanker & Flakes in bags.

SECTION 15: REGULATORY INFORMATION

- Refer Section-2
- As per National / State regulations

SECTION 16: OTHER INFORMATION

Name of the firm	Mailing Address	Contact Person in Emergency	Telephone no.
Shriram Alkali & Chemicals (SAC)	749, GIDC Estate Jhagadia. Pin-393110 Dist: Bharuch	Head of Production	Telephone NOS : +91 2645-226021/23 Fax No : +91 2645-226037

Chlor –Alkali Emergency response network Toll free No. : 1800-11-1735

Disclaimer:

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