



SUPREME PETRO CHEMICALS

IMPORTER & DISTRIBUTOR OF INDUSTRIAL CHEMICALS ·
SINCE 1997

No. 145, 1st Floor, Raja Muthiah Road,
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SAFETY DATA SHEET (SDS)

Caustic Soda Lye *SDS*

REV 3.1

29 JULY 2026

GHS REV.11 (2025)

CAS **1310-73-2**

EC **215-185-5**

SIGNAL WORD **DANGER**

GHS05

Corrosive

GHS07

Harmful / Irritant

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Product Name	Caustic Soda Lye
Product Type	Sodium Hydroxide solution — corrosive alkali
Chemical Family	Inorganic base / alkali metal hydroxide
CAS No.	1310-73-2
EC No.	215-185-5
Intended Use	Industrial / professional use: chemical manufacturing, soap and detergent production, water treatment, pulp and paper, textile processing, metal surface treatment, pH adjustment.
Restrictions on Use	Industrial / professional use only. Confirm suitability for final application before use. Not for domestic consumer use.
Supplier	Supreme Petro Chemicals
Address	No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
Emergency Contact	Sanketh — +91 86087 80096 · Sudarshan — +91 81979 47045
Email	admin@supremepetrochemicals.com
Product Page	https://www.supremepetrochemicals.com/products/caustic-soda-lye
SDS Revision	July 2026
SDS Version	3.1



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SECTION 2 HAZARD IDENTIFICATION

GHS/CLP Classification: Met. Corr. 1 (H290); Skin Corr. 1A (H314); Eye Dam. 1 (H318);
STOT SE 3 (H335)

Signal Word

DANGER

GHS Pictograms

GHS05 (Corrosive) | GHS07 (Harmful / Irritant)

HAZARD STATEMENTS

- H290 — May be corrosive to metals
- H314 — Causes severe skin burns and eye damage
- H318 — Causes serious eye damage
- H335 — May cause respiratory irritation

PRECAUTIONARY — PREVENTION

- P234 — Keep only in original packaging
- P260 — Do not breathe vapours, mist, or spray
- P264 — Wash hands and exposed skin thoroughly after handling
- P271 — Use only outdoors or in a well-ventilated area
- P273 — Avoid release to the environment
- P280 — Wear protective gloves / protective clothing / eye protection / face protection

PRECAUTIONARY — RESPONSE / STORAGE / DISPOSAL

- P301+P330+P331 — IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- P303+P361+P353 — IF ON SKIN OR HAIR: Remove / take off immediately all contaminated clothing. Rinse skin with water / shower
- P304+P340 — IF INHALED: Remove person to fresh air and keep comfortable for breathing
- P305+P351+P338 — IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
- P310 — Immediately call a POISON CENTER or doctor
- P312 — Call a POISON CENTER or doctor if you feel unwell
- P363 — Wash contaminated clothing before reuse
- P390 — Absorb spillage to prevent material damage



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- P405 — Store locked up
- P501 — Dispose of contents / container in accordance with local regulations

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	EC NO.	% W/W	GHS CLASSIFICATION
Sodium Hydroxide (Caustic Soda)	1310-73-2	215-185-5	30–50 (aqueous solution; grade-specific — confirm with supplier COA)	Met. Corr. 1 (H290); Skin Corr. 1A (H314); Eye Dam. 1 (H318); STOT SE 3 (H335)
Water	7732-18-5	231-791-2	Balance	Not classified

Full text of H-statements listed in Section 16. Exact concentration depends on commercial grade (30%, 32%, 48%, 50% w/w). Confirm grade from supplier Certificate of Analysis before use.

SECTION 4 FIRST AID MEASURES

Inhalation	Remove person immediately to fresh air. Keep comfortable for breathing. If breathing is difficult, administer oxygen. Call a POISON CENTER or doctor if symptoms persist.
Skin Contact	Remove contaminated clothing immediately. Flush affected skin with large amounts of water for at least 20 minutes. Seek medical attention if burns, redness, or pain persist. Wash contaminated clothing before reuse.
Eye Contact	IMMEDIATELY rinse cautiously with water for at least 20 minutes, holding eyelids open. Remove contact lenses if present and easy to do — continue rinsing. Immediately call a POISON CENTER or ophthalmologist — serious eye damage can occur.
Ingestion	Rinse mouth thoroughly with water. Do NOT induce vomiting. Do not give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor.
Note to Physician	Caustic alkali burns: treat symptomatic corrosive injury. Provide pain relief and monitor for airway oedema if inhaled. Eye exposure: fluorescein staining to assess corneal injury; specialist ophthalmology review. No specific antidote.



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SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Sodium hydroxide is non-combustible. Use extinguishing media appropriate to surrounding fire — water spray, dry chemical, CO ₂ , foam.
Unsuitable Media	High-pressure water jet directed at the substance may cause spattering of corrosive material.
Specific Hazards	Non-flammable. In fire conditions, concentrated NaOH generates corrosive steam / aerosol. Reaction with metals (aluminium, zinc) can generate hydrogen gas, which is flammable. Containers may build pressure and rupture when heated.
Protective Equipment	Wear full protective clothing (chemical-resistant suit) and self-contained breathing apparatus (SCBA). Do not inhale steam or aerosol.
Special Procedures	Evacuate non-essential personnel. Cool fire-exposed containers with water spray from maximum distance. Prevent contaminated fire-fighting water from entering drains, sewers or waterways.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Evacuate and isolate the spill area. Wear full PPE as described in Section 8 (chemical-resistant gloves, face shield, chemical-resistant boots and suit). Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Environmental Precautions	Prevent entry into drains, sewers, soil and waterways. If significant quantities enter waterways, notify the relevant environmental authority. NaOH solution will raise pH — highly alkaline discharge is harmful to aquatic life.
Containment / Clean-up	Contain spill with sand, vermiculite or dry earth — do not use sawdust. Neutralise cautiously with dilute acid (e.g. dilute HCl or citric acid) only if safe and appropriate. Collect into labelled, compatible, closed containers for disposal. Flush residue area with large volumes of water.
Reference to Sections	See Section 8 for PPE; Section 13 for disposal; Section 15 for regulatory information.



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SECTION 7 HANDLING AND STORAGE

Handling Precautions	Handle in a well-ventilated area. Avoid contact with skin, eyes and clothing. Avoid breathing vapour or aerosol. Use appropriate PPE at all times (Section 8). Handle containers carefully — NaOH solution is dense and corrosive. Add NaOH to water, NEVER water to NaOH (exothermic reaction causes spattering).
Hygiene	Wash hands, forearms and face thoroughly after handling. Remove contaminated clothing before reuse. Do not eat, drink, smoke or apply cosmetics in the handling area.
Storage Conditions	Store in tightly closed, compatible containers (carbon steel, stainless steel, high-density polyethylene — HDPE). Keep in a cool, dry, well-ventilated area away from direct sunlight. Protect from moisture and CO ₂ (absorbs CO ₂ from air to form sodium carbonate).
Storage Temperature	Ambient (15–30°C). Protect from freezing — concentrated NaOH solutions solidify at low temperatures (50% solution freezes at approximately 12°C).
Incompatible Materials	Strong acids (vigorous exothermic reaction), metals (aluminium, zinc, tin — generates hydrogen), halogenated organic compounds, organic nitro compounds, water-reactive materials. Avoid contact with glass over prolonged periods (etches glass).
Segregation	Segregate from acids, halogenated compounds, food, drink, animal feed and incompatible chemicals. Store in a dedicated chemical store with secondary containment.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit	NaOH (CAS 1310-73-2): OSHA PEL — 2 mg/m ³ (ceiling); NIOSH REL — 2 mg/m ³ (ceiling); ACGIH TLV-C — 2 mg/m ³ (ceiling). India STEL — 2 mg/m ³ (IS 4167 / Schedule 11). Confirm current local limits before use.
Engineering Controls	Use closed handling systems or local exhaust ventilation (LEV) where mists, vapour or aerosol may be generated. Provide eyewash station and emergency safety shower within 10 seconds of the work area. Ensure general mechanical ventilation is adequate.
Respiratory Protection	Where OEL/ceiling may be exceeded or mist/vapour is present: use a NIOSH-approved respirator with P100 particulate filter or



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combination cartridge for alkali dusts/mists. For emergency/high-concentration situations use full-face SCBA.

Hand / Eye / Skin

Gloves: chemical-resistant (butyl rubber, neoprene, or PVC; minimum 0.4 mm thickness) – verify breakthrough time for concentration used. Eye/Face: EN 166 chemical splash goggles plus face shield. Body: chemical-resistant apron or full suit and chemical-resistant safety footwear. Provide and maintain eyewash / safety shower.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to slightly yellowish viscous liquid (aqueous solution); colourless when pure. Pure solid NaOH is white opaque solid.
Odour	Odourless
Odour Threshold	Not applicable – odourless
pH	≥ 13 (1% aqueous solution at 20°C); concentrated solution pH > 14
Melting / Freezing Point	318°C (604°F) for pure NaOH solid; aqueous solution freeze point depends on concentration (50% solution ≈ 12°C)
Boiling Point / Range	1388°C (2530°F) for pure NaOH; 50% aqueous solution boils at approximately 145°C (293°F)
Flash Point	Not applicable – not flammable (NaOH is an inorganic base; no flash point)
Auto-ignition Temperature	Not applicable – not combustible
Flammability Limits	Not flammable
Vapour Pressure	≈ 0 mmHg at 20°C (negligible for aqueous solution)
Vapour Density (air = 1)	Not applicable (aqueous solution)
Relative Density	Pure NaOH solid: 2.13 g/cm ³ at 20°C; 50% aqueous solution: ≈ 1.52 g/cm ³ ; 32% solution: ≈ 1.34 g/cm ³
Solubility in Water	Completely miscible / freely soluble. Solubility of solid NaOH: ≈ 111 g / 100 mL at 20°C. Dissolution is highly exothermic.
Log Pow (Partition Coeff.)	Not applicable – ionic substance; does not partition into organic phase
Evaporation Rate	Not applicable (aqueous solution; essentially non-volatile at ambient temperature)
Viscosity	50% NaOH solution: ≈ 4.0 cP at 65°C; viscosity increases at lower temperatures and higher concentrations
VOC Content	0% – no volatile organic compounds



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SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage and handling conditions. Aqueous solutions are stable in compatible containers (HDPE, carbon steel, stainless steel) at ambient temperature.
Conditions to Avoid	Avoid contact with strong acids (violent exothermic reaction), moisture ingress into solid NaOH (generates heat), high temperatures, and CO ₂ exposure (converts to sodium carbonate over time).
Incompatible Materials	Strong acids (sulfuric, hydrochloric, nitric — violent neutralisation reaction with heat generation); metals (aluminium, zinc, tin — generates flammable hydrogen gas); halogenated solvents; water-reactive chemicals; organic nitro compounds.
Hazardous Decomposition	Stable below boiling point. Above ~400°C (solid NaOH): may emit sodium oxide fumes. No decomposition under normal storage. In fire: generates irritating/corrosive steam and sodium oxide vapour.
Hazardous Reactions	Reaction with acids: highly exothermic, risk of spattering. Reaction with aluminium or zinc: generates flammable hydrogen gas, creating fire/explosion risk in enclosed spaces. Does not polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	NaOH: LD ₅₀ (rat, oral) = 325–500 mg/kg (literature range). Strong corrosive — causes immediate chemical burns to mouth, throat, oesophagus and stomach. GHS Classification: Skin Corr. 1A. Numeric LD ₅₀ confirmation from supplier SDS recommended.
Acute Dermal Toxicity	Causes severe chemical burns on skin contact. GHS: Skin Corr. 1A (H314). No specific dermal LD ₅₀ threshold established in reviewed sources — corrosivity is the primary endpoint.
Acute Inhalation Toxicity	Mists / aerosols are highly irritating and corrosive to the respiratory tract. May cause chemical burns to nasal passages, throat and lungs at higher concentrations. GHS: STOT SE 3 (H335).
Skin Irritation	Not separately classified — overridden by Skin Corr. 1A (H314). Causes severe irreversible burns on contact.
Eye Irritation	Not separately classified — overridden by Eye Dam. 1 (H318). Causes serious, potentially irreversible eye damage. Immediate and thorough irrigation is essential.



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Sensitisation	No evidence of skin or respiratory sensitisation (not a known sensitiser).
Carcinogenicity	Not classified as carcinogenic. Not listed by IARC, NTP or OSHA as a carcinogen.
Mutagenicity	Not classified as mutagenic. No evidence of genotoxicity in standard test batteries.

SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity	NaOH solution is highly alkaline (pH > 13). Acute toxicity to aquatic organisms is driven by pH elevation rather than intrinsic toxicity. Fish LC ₅₀ (96h): 35–125 mg/L (literature). Neutralisation occurs in receiving waters; impact depends on dilution and buffering capacity. Not classified as an aquatic hazard under GHS in normal dilution scenarios.
Persistence / Degradability	Not applicable to inorganic substance. NaOH neutralises rapidly in the environment. Not inherently biodegradable in the conventional sense; undergoes dissociation and neutralisation.
Bioaccumulation	Not expected to bioaccumulate (ionic substance, log Kow not applicable).
Mobility in Soil	Highly mobile in soil and groundwater due to water solubility. Raises soil and groundwater pH in immediate release zone; neutralised by soil buffering capacity over time.
Other Adverse Effects	Avoid uncontrolled release to the environment. Alkaline discharges harmful to aquatic ecosystems at high concentrations. Manage releases under applicable environmental regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Neutralise carefully with dilute acid before disposal (if appropriate and safe). Dispose through an authorised hazardous waste contractor in accordance with local and national regulations. Do not discharge concentrated NaOH solution to drain without treatment.
Contaminated Packaging	Empty containers may retain corrosive residues. Rinse three times with water before disposal. Handle as hazardous waste until cleaned or confirmed inert. Do not reuse for food, feed or drinking water.



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Indian Regulations

Comply with Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2016 (amended), Environment Protection Act 1986, and applicable State Pollution Control Board requirements. NaOH waste may be classified as Schedule I / Category 28 hazardous waste — confirm with local SPCB.

SECTION 14 TRANSPORT INFORMATION

PARAMETER	UN / ADR (ROAD)	IMDG (SEA)	IATA (AIR)
UN Number	UN 1824	UN 1824	UN 1824
Proper Shipping Name	SODIUM HYDROXIDE SOLUTION	SODIUM HYDROXIDE SOLUTION	SODIUM HYDROXIDE SOLUTION
Class	8 (Corrosive)	8 (Corrosive)	8 (Corrosive)
Packing Group	II (≥ 12% concentration)	II (≥ 12% concentration)	II (≥ 12% concentration)
Marine Pollutant	No	No	N/A
Tunnel Restriction	E	—	—
EmS (Sea)	—	F-A, S-B	—

UN 1824 applies to aqueous solution (Caustic Soda Lye). UN 1823 applies to solid Caustic Soda (flakes/pearls/prills) — confirm grade with supplier before completing transport documentation. PG II applies to solutions ≥ 12% w/w; PG III applies to solutions < 12% w/w. Use UN-certified, compatible containers (HDPE or carbon steel). Label with Class 8 corrosive placard. Verify current ADR/IMDG/IATA requirements before shipment.

SECTION 15 REGULATORY INFORMATION

EU / REACH / CLP

Sodium Hydroxide is a registered REACH substance (CAS 1310-73-2; EC 215-185-5). Classified and labelled in accordance with CLP Regulation (EC) No 1272/2008 and GHS Rev.11. ECHA C&L inventory entry available. Not subject to SVHC authorisation as of date of issue.

OSHA (USA)

Prepared in OSHA HCS / HazCom 2012 (29 CFR 1910.1200) aligned 16-section SDS format. NaOH listed on OSHA Z-Table with PEL-C of 2 mg/m³. Not classified as a hazardous air pollutant (HAP) under the Clean Air Act.

India

Observe applicable requirements under: Manufacture, Storage and Import of Hazardous Chemical (MSIHC) Rules 1989 (amended); Factories Act 1948; Hazardous Waste Rules 2016; Environment Protection Act 1986; applicable State Pollution Control Board



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conditions. NaOH is listed in Schedule 1 of MSIHC Rules — threshold quantity 250 tonnes.

Other Jurisdictions

Canada WHMIS 2015 / HPR: Classify and label under WHMIS using Section 2 classification; bilingual SDS and ingredient disclosure required for Canadian sale. China: Comply with GB/T 17519 SDS requirements and GB 30000 GHS classification standards. Australia (AICS): NaOH is listed on the Australian Inventory of Industrial Chemicals (AIIC). Middle East / GCC: Comply with applicable GHS-aligned local requirements. TSCA (USA): NaOH is listed on the TSCA Chemical Substance Inventory — verify SNUR status before US import.

SECTION 16 OTHER INFORMATION

Prepared By	Supreme Petro Chemicals — Technical Department
SDS Standard	UN GHS Rev.11 (2025); OSHA HCS/HazCom; EU CLP/REACH Annex II; Canada WHMIS/HPR — 16-section format
Revision Date	24 June 2026
Version	3.0 (supersedes prior issues)
Disclaimer	Information is given in good faith and believed accurate at issue. It does not constitute a specification or guarantee; the user is responsible for safe use, handling and compliance.

FULL TEXT OF H-STATEMENTS

- H290 — May be corrosive to metals
- H314 — Causes severe skin burns and eye damage
- H318 — Causes serious eye damage
- H335 — May cause respiratory irritation