

CAUSTIC SODA LYE (LIQUID NaOH)

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

CAUSTIC SODA LYE (LIQUID NaOH)
Sodium Hydroxide Solution; Soda Lye; Caustic Lye
CAS: 1310-73-2

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Chemical intermediate, pH adjustment/neutralisation, soap and detergent manufacture, pulp and paper processing, water treatment, textile/dyeing, food processing (e.g. as processing aid). For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), based on the mandatory (harmonised) GHS classification for sodium hydroxide (CAS 1310-73-2), applicable to solutions at commercial trading strengths (typically 30–50% w/w).

Skin Corr. 1A	Skin corrosion, Category 1A, H314
Eye Dam. 1	Serious eye damage, Category 1, H318 (subsumed under H314)

2.2 GHS label elements, including precautionary statements:

GHS: Danger

Hazard statements:

H314: Causes severe skin burns and eye damage.

Precautionary statements:

P260: Do not breathe mist/vapours.
P264: Wash exposed skin thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
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/doctor.
P321: Specific treatment (see first-aid advice on this label).
P405: Store locked up.
P501: Dispose of contents/container in accordance with local/regional/national regulations.

2.3 Other hazards which do not result in classification:

Reacts with certain metals (aluminium, zinc, tin) to generate flammable/explosive hydrogen gas. Not a PBT/vPvB substance.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Sodium Hydroxide (NaOH), aqueous solution
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 1310-73-2	Sodium Hydroxide – Skin Corr. 1A: H314 – Danger	30–50%
CAS: 7732-18-5	Water	Balance

Exact concentration confirmed on the product Certificate of Analysis. To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

Aqueous solution of sodium hydroxide as indicated above.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

Remove person to fresh air and keep at rest. If breathing is difficult, give oxygen. Seek immediate medical attention.

By skin contact:

Remove contaminated clothing immediately. Flush skin with plenty of water for at least 15–20 minutes. Obtain immediate medical attention – treat as a chemical burn.

By eye contact:

Rinse immediately with plenty of water for at least 20 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Obtain immediate medical attention.

By ingestion/aspiration:
Do NOT induce vomiting. Rinse mouth with water. Give water to drink if the person is conscious and alert. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed:
Causes severe skin burns and eye damage. May cause serious, permanent tissue damage on contact. Ingestion may cause severe burns to the mouth, throat, oesophagus and stomach.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:
Treat as a chemical burn; specialist medical attention required for significant exposures.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:
Suitable: Use extinguishing media appropriate to the surrounding fire (water spray, foam, dry chemical, CO₂).
Unsuitable: None known.

5.2 Specific hazards arising from the chemical:
Not combustible. Reacts with certain metals (aluminium, zinc, tin, lead) to liberate flammable/explosive hydrogen gas.

5.3 Special protective actions for fire-fighters:
Wear self-contained breathing apparatus and full acid/alkali-resistant protective suit.

Additional provisions:
Cool fire-exposed containers with water spray if safe to do so. Avoid contact of spillage with reactive metals.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
For non-emergency personnel:
Evacuate the area. Wear full PPE described in section 8. Avoid skin and eye contact.

For emergency responders:
Wear full chemical-protective clothing and SCBA. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:
Prevent entry into drains, watercourses or soil. Notify the relevant authority in case of significant environmental release.

6.3 Methods and materials for containment and cleaning up:
Dike far ahead of the spill to contain. Neutralise cautiously with a dilute acid (e.g. dilute HCl) under controlled conditions, or absorb with inert material and collect in suitable containers for disposal.

6.4 Reference to other sections:
See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:
A. General precautions for safe use:
Avoid all contact with skin and eyes. Do not breathe mist/vapour. Use with adequate ventilation. Add caustic to water, never water to caustic, when diluting.

B. Technical recommendations for the prevention of fires and explosions:
Keep away from aluminium, zinc, tin and other reactive metals to avoid hydrogen gas generation and accumulation in confined spaces.

C. Technical recommendations on general occupational hygiene:
Do not eat, drink or smoke while handling. Wash hands and exposed skin thoroughly after handling.

D. Technical recommendations to prevent environmental risks:
Provide bunding around storage tanks; prevent uncontrolled discharge to drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities:
A. Specific storage requirements:

Storage condition	Store in closed, corrosion-resistant tanks/containers (e.g. HDPE, coated steel), banded, in a cool, well-ventilated place; avoid freezing (crystallisation) at high concentrations
Incompatible materials	Acids, aluminium, zinc, tin, organic halogen compounds, water-reactive materials

B. General conditions for storage:
Keep containers tightly closed. Segregate from acids and reactive metals. See subsection 10.5.

7.3 Specific end use(s):
Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:
Substances whose occupational exposure limits have to be assessed in the workplace, per the Factories Act, 1948, as amended:

Identification	Occupational Exposure Limit Type	Value
Sodium Hydroxide CAS: 1310-73-2	Ceiling limit	2 mg/m³

8.2 Appropriate engineering controls:
Provide local exhaust ventilation to control mist/vapour and keep airborne concentrations below the occupational exposure limit.

B. Respiratory protection:
Use a NIOSH/BIS-approved respirator with acid-gas/particulate cartridge where ventilation is inadequate; use SCBA for spill response/confined space entry.

C. Specific protection for the hands:
Chemical-resistant gloves (butyl rubber, neoprene, PVC or nitrile), impervious to concentrated alkali.

D. Eye and face protection:
Chemical safety goggles and face shield; do not rely on safety glasses alone.

E. Bodily protection:
Acid/alkali-resistant apron/suit and boots. Change contaminated clothing immediately.

F. Additional emergency measures:
Emergency shower (ANSI Z358-1) and eyewash stations (ISO 3864) must be readily available in the work area.

Environmental exposure controls:
Prevent environmental release of both product and container; see subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance

Acute Toxicity	Species	Genus
LC50: ~45.4 mg/L (96h, pH-dependent)	Gambusia affinis	Fish
EC50: ~40 mg/L (48h, pH-dependent)	Non-applicable	Crustacean

12.2 Persistence and degradability:
Inorganic; biodegradation is not applicable. Fully neutralised/buffered rapidly in typical receiving waters.

12.3 Bioaccumulative potential:
Not expected to bioaccumulate.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not applicable	Not applicable	Highly soluble/mobile; will raise soil pH locally	

12.5 Results of PBT and vPvB assessment:
Not applicable (inorganic substance).

12.6 Other adverse effects:
Uncontrolled release may cause significant local pH shift harmful to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:
Neutralise carefully with dilute acid under controlled conditions and dilute prior to disposal in accordance with local discharge consent, or dispose of via a licensed hazardous-waste contractor. Empty containers may retain hazardous residue.
Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR/RID):

14.1 UN number	UN1824
14.2 UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es)	8
14.4 Packing group	II
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG):

14.1 UN number	UN1824
14.2 UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es)	8
14.4 Packing group	II
14.5 Marine pollutant	No
14.6 Special precautions for user	EmS Codes: F-A, S-B
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO):

14.1 UN number	UN1824
14.2 UN proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es)	8
14.4 Packing group	II
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:
Listed under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 (India). It is recommended to use the information in this SDS as data for a local risk evaluation for handling, use, storage and disposal.

Other legislation:
Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
The Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996
Public Liability Insurance Act, 1991

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:
This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:
H314: Causes severe skin burns and eye damage.
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training:
Personnel handling this product should receive training on the hazards of corrosive alkalis, safe dilution practice, PPE use and emergency response before use.

Principal bibliographical sources:
Publicly available (mandatory/harmonised) GHS classification and physicochemical reference data for sodium hydroxide (CAS 1310-73-2).

Abbreviations and acronyms:
LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | IARC: International Agency for Research on Cancer | SCBA: Self-Contained Breathing Apparatus

simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET