

MATERIAL SAFETY DATA SHEET

CAUSTIC SODA LYE

Issue Date: 02.07.2024

SECTION 1: IDENTIFICATION

Product form	Liquid
Trade Name	Caustic soda lye, sodium hydroxide solution
CAS NO	1310-73-2
Product group	Trade product
Supplier	Indlela Consultants (Pty) Ltd 301 66 Sapphire street Witfontein 301/893 Pretoria 0182
Emergency Contact	Robertson Phiri 0823072544 robertsonp@indlelasa.com website: www.indlelasa.com

Section 2: Hazard Identification

Classification:

Corrosive to metals (Category 1)
Skin corrosion/irritation (Category 1A)
Serious eye damage/eye irritation (Category 1)

Label Elements:

Signal Word: Danger
Hazard Statements:
H290: May be corrosive to metals.
H314: Causes severe skin burns and eye damage.
Precautionary Statements:
P234: Keep only in original container.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.



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P264: Wash hands 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.

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/physician.

Section 3: Composition/Information on Ingredients

Chemical Name: Sodium Hydroxide

Common Name: Caustic Soda

Concentration: Typically 20-50%

CAS Number: 1310-73-2

Section 4: First-Aid Measures

Inhalation: Remove person to fresh air and keep comfortable for breathing. Seek medical attention immediately.

Skin Contact: Remove contaminated clothing immediately. Wash skin thoroughly with soap and water for at least 15 minutes. Seek medical attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek immediate medical attention.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Specific Hazards Arising from the Chemical: Sodium hydroxide itself is non-combustible but may react with metals to produce flammable hydrogen gas.

Special Protective Equipment and Precautions for Firefighters: Wear self-contained breathing apparatus and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions: Evacuate personnel to safe areas. Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.

Environmental Precautions: Do not let the product enter drains. Discharge into the environment must be avoided.

Methods for Containment and Cleaning Up: Absorb with inert material (e.g., dry sand or earth), then place in a chemical waste container. Neutralize residue with dilute acid.

Section 7: Handling and Storage

Precautions for Safe Handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use in well-ventilated areas.

Conditions for Safe Storage: Store in a cool, dry place. Keep container tightly closed in a well-ventilated place. Store away from incompatible materials such as acids.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits:

- **ACGIH TLV:** 2 mg/m³ Ceiling
- **OSHA PEL:** 2 mg/m³ TWA

Engineering Controls: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment:

Eye Protection: Safety goggles or face shield.

Skin Protection: Protective gloves and clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

Section 9: Physical and Chemical Properties

Appearance: Clear, colorless liquid

Odor: Odorless

pH: 12-14 (highly alkaline)

Melting Point: -28°C (-18°F) for 50% solution

Boiling Point: 140°C (284°F) for 50% solution

Flash Point: Not applicable

Relative Density: Approximately 1.53 for 50% solution

Solubility: Miscible with water

Section 10: Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Reacts violently with acids, releasing heat. Reacts with metals to form hydrogen gas.

Conditions to Avoid: Incompatible materials, excessive heat, and moisture.

Incompatible Materials: Acids, organic materials, chlorinated hydrocarbons, aluminum, zinc, and tin.

Hazardous Decomposition Products: None under normal conditions of use and storage.



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Section 11: Toxicological Information

Acute Toxicity:

Oral LD50: 140-340 mg/kg (rat)

Dermal LD50: No data available

Skin Corrosion/Irritation: Causes severe skin burns.

Serious Eye Damage/Irritation: Causes severe eye damage.

Respiratory or Skin Sensitization: Not classified.

Carcinogenicity: Not classified.

Reproductive Toxicity: Not classified.

Section 12: Ecological Information

Ecotoxicity: Harmful to aquatic life due to pH shift.

Persistence and Degradability: The product is not biodegradable.

Bioaccumulative Potential: Low potential for bioaccumulation.

Mobility in Soil: No data available.

Section 13: Disposal Considerations

Waste Treatment Methods: Dispose of waste in accordance with local, state, and federal regulations. Neutralize waste with dilute acid before disposal.

Section 14: Transport Information

UN Number: 1824

UN Proper Shipping Name: Sodium Hydroxide Solution

Transport Hazard Class(es): 8 (Corrosive)

Packing Group: II

Environmental Hazards: Not a marine pollutant.

Special Precautions: Transport in secure, labeled containers.

Section 15: Regulatory Information

OSHA Hazard Communication Standard: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).



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TSCA Inventory: All components of this product are listed on or are exempt from the Toxic Substances Control Act (TSCA) Inventory.

International Regulations:

European Union: Conforms to EC Directive 67/548/EEC.

Section 16: Other Information

Disclaimer: The information provided in this MSDS is based on the present state of our knowledge and is intended to describe the product with regard to safety requirements. It should not be construed as guaranteeing any specific property of the product