

PRODUCT IDENTIFICATION



Product Name: Sodium Hydroxide 25%

CAS Number: 1310-73-2

Molecular Formula: HNaO

Molecular Weight: 39.997 g/mol

Grade: Technical

Purity / Concentration: 25%

Synonyms: Caustic Soda, Lye

PRODUCT OVERVIEW

Alliance Chemical provides high-quality 25% Sodium Hydroxide, also known as caustic soda or lye, in a reliable technical grade. This clear, pale liquid features a precise assay of 25.3% and extremely low impurity levels, including iron at 0.2 ppm, making it an essential reactant for industrial neutralization and chemical synthesis.

Grade Significance: Technical grade indicates that this product is manufactured for industrial and manufacturing utility rather than food or pharmaceutical use, providing a cost-effective solution for large-scale applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	25	24.5	25.5	Titration
Iron	ppm	1	0	2	ICP
Chloride (Cl ⁻)	ppm	9	0	50	Ion chromatography
Sulfate (SO ₄ ²⁻)	ppm	8	0	20	Ion chromatography
Carbonate	%	0.03	0	0.1	Titration

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, pale liquid	Odor	Odorless
Form	Liquid	Boiling Point	Not characterized for the 25% solution
Melting / Freezing Point	Not characterized for the 25% solution	Specific Gravity	1.27
Solubility	High water solubility, miscible with polar solvents	Molecular Formula	HNaO
Molecular Weight	39.997 g/mol	Viscosity (25°C)	1.0 cP
Refractive Index (20°C)	1.333	Density (25°C)	1.2 g/mL

APPLICATIONS

1. **Water Treatment** — Used effectively to neutralize acidic water streams and maintain optimal pH levels in municipal and industrial treatment processes.
2. **Chemical Manufacturing** — Serves as a fundamental reactant in the production of diverse chemical compounds, including specialized surfactants.
3. **Soap and Detergent** — Utilized extensively in the saponification process to convert fats and oils into high-quality soaps and cleaning agents.
4. **Analytical Chemistry** — Acts as a primary reagent for laboratory testing and various analytical chemistry applications requiring consistent alkalinity.

STORAGE & HANDLING

Proper storage is critical because Sodium Hydroxide is highly corrosive and causes severe skin burns and eye damage upon contact. It must be kept in compatible, sealed containers to prevent exposure to air and moisture, which could compromise the product's concentration and safety profile.

- Store in a cool, dry place away from incompatible materials such as acids.
- Use containers made of HDPE or glass to prevent reactions.
- Ensure proper ventilation when handling to avoid inhalation of vapors.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.
- Avoid exposure to moisture to maintain product integrity.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Danger



Hazard Statements:

- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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