

PRODUCT IDENTIFICATION



Product Name: Sodium Hydroxide Flakes

CAS Number: 1310-73-2

Molecular Formula: HNaO

Molecular Weight: 39.997 g/mol

Grade: Technical Grade

Purity / Concentration: 100%

Synonyms: Caustic Soda, Soda Lye

PRODUCT OVERVIEW

Sodium Hydroxide Flakes, also known as Caustic Soda, are a high-purity technical grade chemical supplied as white crystalline flakes. Featuring a 98.5% assay and minimal impurity levels, such as 2 ppm of iron, this versatile reagent is essential for diverse industrial and laboratory applications.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and commercial use where high chemical consistency is required, but it is not intended for pharmaceutical or food-grade applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	98.5	97	—	Titration with HCl
Residue After Ignition	%	0.1	—	0.2	Gravimetric
Water Content	%	0.5	—	1	Karl Fischer Titration
Iron (Fe)	ppm	2	—	5	ICP-OES
Sodium Carbonate Na ₂ CO ₃	%	0.6	—	1	Titration
Chloride (Cl ⁻)	ppm	15	—	30	Ion Chromatography
Sulfate (SO ₄ ²⁻)	ppm	10	—	25	Ion Chromatography

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White crystalline flakes	Form	Solid
Boiling Point	1390°C (2534°F)	Melting / Freezing Point	318°C (604°F)
Specific Gravity	2.13	Solubility	Highly soluble in water, moderate alcohol solubility
Molecular Formula	HNaO	Molecular Weight	39.997 g/mol

APPLICATIONS

- Water Treatment** — Used effectively for pH adjustment and neutralization of acidic wastewater streams.
- Chemical Manufacturing** — Serves as a fundamental building block in the synthesis of various organic and inorganic compounds.
- Pulp and Paper** — Utilized in the pulping process to dissolve lignin and separate cellulose fibers efficiently.
- Cleaning and Sanitation** — Acts as a powerful active ingredient in industrial-strength degreasers and heavy-duty drain cleaners.
- Textile Industry** — Employed in the mercerization process to increase the luster, strength, and dye affinity of cotton fibers.

STORAGE & HANDLING

Sodium Hydroxide is highly hygroscopic, meaning it readily absorbs moisture from the air, which can cause the flakes to clump or liquefy. Proper sealed storage is also critical to prevent accidental contact, as the material causes severe skin burns and eye damage upon exposure.

- Store in a cool, dry place away from incompatible materials such as acids.
- Use appropriate personal protective equipment (PPE) including gloves and goggles when handling.
- Ensure proper ventilation in storage areas to avoid accumulation of dust.
- Keep containers tightly closed to prevent moisture absorption.

AVAILABLE PACKAGING

- 2 lbs.
- 4 Lbs.
- 55 Lbs.

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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