

### 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

Alliance Chemical's Technical Grade Sodium Hydroxide Flakes are a highly pure (98.5% assay) form of NaOH, appearing as white crystalline flakes. Also known as Caustic Soda or Soda Lye, this product is commonly used for general industrial and laboratory applications. The low levels of impurities such as Sodium Carbonate (0.6%) ensure consistent performance in demanding applications.

**Grade Significance:** Technical Grade Sodium Hydroxide is suitable for a wide range of industrial applications where high purity is desired but not critical. While not as pure as reagent or ACS grade, it offers a cost-effective solution for many processes.

### 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 <sub>2</sub> CO <sub>3</sub>	%	0.6	—	1	Titration
Chloride (Cl <sup>-</sup> )	ppm	15	—	30	Ion Chromatography
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	ppm	10	—	25	Ion Chromatography

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

### PHYSICAL & CHEMICAL PROPERTIES

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

## APPLICATIONS

- 1. Chemical Manufacturing** — Used as a strong base in various chemical reactions, including neutralization, saponification, and pH adjustment. Its high purity ensures minimal interference from unwanted byproducts during synthesis.
- 2. Water Treatment** — Employed to raise the pH of water, aiding in the precipitation of heavy metals and other contaminants. The controlled levels of Chloride (15 ppm) and Sulfate (10 ppm) are important to avoid introducing unwanted ions into the water system.
- 3. Pulp and Paper Industry** — Used in the pulping process to delignify wood fibers. The low Iron (Fe) content (2 ppm) helps prevent discoloration of the paper product.
- 4. Textile Industry** — Used in mercerization of cotton, which improves the strength, luster, and dye affinity of the fabric. Consistent product quality is important for uniform treatment.
- 5. Cleaning Products** — A key ingredient in many cleaning formulations, including drain cleaners and detergents, due to its ability to dissolve grease and organic matter. The residue after ignition (0.1 %) is a quality indicator for consistent formulations.
- 6. Laboratory Use** — Used as a reagent in various analytical and research applications. High purity is essential for accurate and reliable results.

## STORAGE & HANDLING

Proper storage of Sodium Hydroxide Flakes is crucial to maintain product integrity and safety. This product is hygroscopic, meaning it readily absorbs moisture from the air, which can lead to clumping and reduced concentration. Due to its corrosive nature (H314: Causes severe skin burns and eye damage), it should be stored in tightly sealed containers in a dry, well-ventilated area, away from incompatible materials.

- 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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