

PRODUCT IDENTIFICATION



Product Name: Sodium Hydroxide Flakes ACS Grade

CAS Number: 1310-73-2

Molecular Formula: HNaO

Molecular Weight: 39.997 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: Caustic Soda, Sodium Hydrate

PRODUCT OVERVIEW

Alliance Chemical's Sodium Hydroxide Flakes, ACS Grade, are a high-purity form of sodium hydroxide, boasting an assay of 98.1%. These white, hygroscopic flakes are commonly used to neutralize acidic water and maintain optimal pH levels in various treatment processes. Due to its high purity and consistent quality, this product is suitable for demanding applications.

Grade Significance: ACS Grade signifies that this Sodium Hydroxide meets the stringent purity requirements set by the American Chemical Society, ensuring its suitability for laboratory use and other critical applications where high purity is essential. This guarantees consistent and reliable results in analytical and research settings.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	98.1	97	—	Titration
Heavy Metals (as Pb)	ppm	0.2	—	5	ICP-OES
Iron (Fe)	ppm	0.1	—	3	ICP-OES
Nickel (Ni)	ppm	0.05	—	1	ICP-OES
Potassium (K)	ppm	5	—	20	ICP-OES
Ammonium (NH ₄ ⁺)	ppm	1	—	5	ISE
Chloride (Cl ⁻)	ppm	2	—	5	ISE
Phosphate (PO ₄ ³⁻)	ppm	0.1	—	1	Spectrophotometry
Sulfate (SO ₄ ²⁻)	ppm	2	—	5	Turbidimetry
Insoluble Substances	%	0.0020	—	0.0050	Gravimetric
Carbonate Na ₂ CO ₃	%	0.6	—	1	Titration
Mercury Hg	ppm	0.01	—	0.1	ICP-MS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White hygroscopic flakes	Odor	Odorless
Form	Solid	Boiling Point	1388°C (2530°F)
Melting / Freezing Point	318°C (604°F)	Flash Point	Not applicable
Specific Gravity	2.13	Solubility	Highly soluble in water, moderate solubility in alcohols, forms alkaline solutions
Molecular Formula	HNaO	Molecular Weight	39.997 g/mol
Density (25°C)	2.13 g/mL		

APPLICATIONS

- Water Treatment** — Sodium Hydroxide is used to neutralize acidic water and maintain optimal pH levels in treatment processes. This ensures the water is safe for consumption or discharge.
- Chemical Manufacturing** — It acts as a strong base in various chemical reactions, including saponification and esterification. Its high purity ensures efficient and predictable reaction outcomes.
- Soap Production** — Sodium Hydroxide is essential in the production of soaps through the saponification process. It reacts with fats and oils to form soap and glycerin.
- Textile Industry** — It is utilized in the dyeing and finishing processes of textiles to enhance color uptake. This ensures vibrant and long-lasting colors in fabrics.
- Pharmaceuticals** — Used as a reagent and pH adjuster in the manufacturing of various pharmaceutical products. The ACS grade ensures minimal impurities that could interfere with drug efficacy.
- Laboratory Reagent** — Due to its high purity, it is suitable for use as a reagent in analytical chemistry and research. Consistent quality is critical for reliable experimental results.

STORAGE & HANDLING

Sodium Hydroxide Flakes are hygroscopic and readily absorb moisture from the air, which can cause clumping and reduce the product's effectiveness. Proper storage in tightly sealed containers, away from moisture and incompatible materials, is crucial to maintain its purity and prevent hazardous reactions, as it can cause severe skin burns and eye damage.

- Store in a cool, dry place away from moisture and incompatible materials.
- Use appropriate personal protective equipment (PPE) including gloves and goggles.
- Ensure containers are tightly sealed to prevent moisture absorption.
- Compatible with HDPE and glass containers; avoid aluminum and zinc materials.
- Provide adequate ventilation in storage areas to minimize exposure to dust.

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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