

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 offers high-purity Sodium Hydroxide Flakes in ACS Grade, a versatile and powerful caustic agent. With a high assay of 98.1% and strictly controlled impurities like iron and heavy metals, this reagent-grade material is essential for precise chemical processing and pH adjustment.

Grade Significance: ACS Grade signifies that this product meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for demanding laboratory and analytical applications where impurity levels must be strictly minimized.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	97	96.5	97.5	Titration
Calcium Ca	ppm	15	0	50	ICP-MS
Iron	ppm	0.9	0	3	ICP
Magnesium Mg	ppm	10	0	20	ICP-MS
Nickel Ni	ppm	5	0	10	ICP-MS
Potassium K	%	0.012	0	0.02	ICP-MS
Chloride (Cl ⁻)	ppm	17	0	100.0	Ion chromatography
Phosphate Po4	ppm	5	0	10	ICP
Sulfate (SO ₄ ²⁻)	ppm	16	0	40	Ion chromatography
Carbonate	%	0.03	0	0.1	Titration
Mercury Hg	ppm	0.3	0	1	ICP-MS
Nitrogen	ppm	5	0	10	Kjeldahl / Chemiluminescence

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White hygroscopic flakes	Odor	Odorless
Form	Solid	Boiling Point	greater than 266 °F at 760 mmHg (USCG, 1999)
Melting / Freezing Point	604 °F (USCG, 1999)	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

1. **Water Treatment** — Used to effectively neutralize acidic water and maintain optimal pH levels in municipal and industrial treatment processes.
2. **Chemical Manufacturing** — Acts as a strong base in critical chemical reactions, serving as a primary catalyst for saponification and esterification processes.
3. **Personal Care and Soap** — Essential in the production of high-quality soaps, where it facilitates the saponification of fats and oils.
4. **Textiles** — Utilized in dyeing and finishing processes to properly prepare fibers and enhance overall color uptake and vibrancy.

STORAGE & HANDLING

Sodium Hydroxide is highly hygroscopic, meaning it absorbs moisture from the air, which can cause the flakes to clump and degrade. Proper storage in a tightly sealed, moisture-proof container is critical to maintain product integrity and prevent dangerous exothermic reactions with water or humidity.

- 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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

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