

PRODUCT IDENTIFICATION



Product Name: Potassium Hydroxide Flakes ACS Grade

CAS Number: 1310-58-3

Molecular Formula: HKO

Molecular Weight: 56.106 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: KOH Flakes, Potash Lye

PRODUCT OVERVIEW

Potassium Hydroxide Flakes (ACS Grade) are high-purity, white crystalline flakes designed for rigorous laboratory and industrial applications. Featuring a high assay of 90.3% and extremely low trace metal content, this product serves as a reliable, strong base for precise chemical synthesis and pH adjustment.

Grade Significance: ACS Grade signifies that the product meets the strict analytical standards set by the American Chemical Society, ensuring the consistency and purity required for sensitive laboratory and industrial processes.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	90.3	85	100.0	Titration
Heavy Metals As Pb	ppm	3	—	10	ICP-MS (as Pb)
Iron	ppm	1.5	—	5	ICP
Nickel Ni	ppm	2	0	4	ICP-MS
Chloride (Cl ⁻)	ppm	0.0029	—	0.01	Ion chromatography
Phosphate	ppm	0.0006	—	0.0020	Per specification
Sulfate (SO ₄ ²⁻)	ppm	0.0015	—	0.0050	Ion chromatography
Carbonate	%	0.37	—	2	Titration
Nitrogen	ppm	6	—	20	Kjeldahl / Chemiluminescence

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White, crystalline hygroscopic flakes	Odor	Odorless
Form	Solid	Boiling Point	greater than 266 °F at 760 mmHg (USCG, 1999)
Melting / Freezing Point	680 °F approximately (NTP, 1992)	Specific Gravity	2.044
Solubility	High water solubility, dissolves in alcohols	Molecular Formula	HKO
Molecular Weight	56.106 g/mol	Density (25°C)	0.85 g/mL

APPLICATIONS

1. **Water Treatment** — Used to precisely adjust pH levels in municipal and industrial water treatment to ensure compliance with stringent environmental safety regulations.
2. **Chemical Manufacturing** — Acts as a potent catalyst and strong base in chemical synthesis, particularly in the efficient production of biodiesel and high-quality soaps.
3. **Energy Storage** — Utilized as a high-performance electrolyte in alkaline batteries to improve electrical conductivity and overall device longevity.
4. **Food Processing** — Applied in food manufacturing, such as the processing of cocoa and chocolate, to carefully balance acidity and optimize product quality.

STORAGE & HANDLING

Due to its hygroscopic nature, this material must be stored in a cool, dry, and well-ventilated area to prevent moisture absorption and clumping. Proper containment is essential to mitigate hazards, as the material is corrosive to metals and can cause severe skin and eye burns upon contact.

- Store in a cool, dry place away from moisture and incompatible materials.
- Use containers made of HDPE or glass to prevent reactions.
- Avoid contact with acids and organic materials to prevent exothermic reactions.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles when handling.
- Ensure adequate ventilation in storage areas to prevent accumulation of vapors.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 55 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H290: May be corrosive to metals
- H302: Harmful if swallowed
- H314: Causes severe skin burns and eye damage

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

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.