

PRODUCT IDENTIFICATION



Product Name: Potassium Hydroxide (KOH) Technical Grade
CAS Number: 1310-58-3
Molecular Formula: HKO
Molecular Weight: 56.106 g/mol
Grade: Technical Grade
Purity / Concentration: Not Available
Synonyms: Caustic Potash, Potash Lye

PRODUCT OVERVIEW

Potassium Hydroxide (KOH) Technical Grade, also known as Caustic Potash, is a high-purity solid reagent featuring a 90.746% assay concentration. This white crystalline powder is essential for industrial processes requiring a strong alkaline base, characterized by its low heavy metal content and versatility in chemical synthesis.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and commercial applications where high purity is required, but it is not intended for food, drug, or medicinal use.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	90.746	90	91.5	Titration
Heavy Metals As Pb	ppm	3	—	10	ICP-MS (as Pb)
Iron	ppm	2.526	—	5	ICP
Sodium Na	ppm	5900.0	—	—	ICP-MS
Chloride (Cl ⁻)	ppm	210.0	—	1000.0	Ion chromatography
Phosphate	ppm	0.0006	—	0.5	Per specification
Sulfate (SO ₄ ²⁻)	ppm	0.0010	—	13	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 powder	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	Highly water-soluble, moderate alcohol solubility	Molecular Formula	HKO
Molecular Weight	56.106 g/mol	Density (25°C)	0.84 g/mL
Partition Coefficient (log P)	Not applicable (inorganic salt)		

APPLICATIONS

1. **Water Treatment** — Used as a powerful pH adjuster to neutralize acidic water streams in municipal and industrial treatment facilities.
2. **Chemical Manufacturing** — Serves as a fundamental strong base in organic and inorganic chemical syntheses and complex reaction processes.
3. **Personal Care and Cleaning** — Acts as a vital saponifying agent in the production of liquid soaps, detergents, and specialized cleaning formulations.
4. **Energy Storage** — Utilized as a high-performance electrolyte in the manufacturing of alkaline batteries to facilitate ion transfer.

STORAGE & HANDLING

Potassium Hydroxide is highly hygroscopic and corrosive; it must be stored in a cool, dry, well-ventilated area to prevent moisture absorption and container degradation. Proper containment is critical to avoid contact with incompatible metals and to mitigate the risk of severe skin burns and eye damage.

- Store in a cool, dry place away from moisture and incompatible substances.
- Use appropriate personal protective equipment (PPE) including gloves and goggles.
- Ensure containers are tightly sealed to prevent moisture absorption.
- Material compatibility includes HDPE and glass; avoid aluminum and zinc.

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.

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