

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 is a highly effective, solid-form caustic agent known for its strong basic properties and high assay of 90.746%. This white crystalline powder serves as a versatile chemical building block, frequently utilized for pH adjustment and industrial synthesis.

Grade Significance: Technical Grade signifies that this product is manufactured for general industrial utility where high-performance chemical activity is needed, without the stringent purity requirements of food or pharmaceutical grades.

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 primary chemical agent to effectively raise the pH of acidic water streams, ensuring compliance with environmental and process standards.
2. **Chemical Manufacturing** — Functions as a powerful base in various chemical reactions and complex syntheses where strong alkalinity is required to drive production yields.
3. **Consumer Goods** — Acts as a vital saponifying agent in the production of soaps and liquid detergents, enabling the conversion of fats and oils into usable surfactants.
4. **Energy Storage** — Utilized as a high-performance electrolyte in alkaline batteries, facilitating the necessary ion exchange for reliable power output.

STORAGE & HANDLING

Proper storage is essential because Potassium Hydroxide is corrosive to metals and can cause severe skin burns or eye damage upon contact. It must be kept in a cool, dry, and well-ventilated area in tightly sealed, compatible containers to prevent moisture absorption and accidental reactions.

- 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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