TECHNICAL DATA SHEET

Potassium Bicarbonate - FCC USP Grade

Revised: 02/20/2026

PRODUCT IDENTIFICATION

Product Name: Potassium Bicarbonate - FCC USP Grade
CAS Number: 298-14-6
Molecular Formula: $CHKO_3$
Molecular Weight: 100.115 g/mol
Grade: USP Grade
Purity / Concentration: Not Available
Synonyms: Potassium Hydrogen Carbonate, Kalium Bicarbonate

PRODUCT OVERVIEW

Potassium Bicarbonate FCC USP Grade is a high-purity product, typically assaying at 99.8%, suitable for applications requiring stringent quality control. This fine, white crystalline powder is primarily used as a pH regulator in pharmaceutical and food applications, as well as a leavening agent in baking.

Grade Significance: USP Grade signifies that this Potassium Bicarbonate meets the stringent requirements of the United States Pharmacopeia (USP), ensuring its suitability for use in pharmaceutical, food, and other applications where purity and quality are paramount. This certification assures end-users of consistent quality and compliance with industry standards.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	99.8	99.5	101.5	USP <301>
Heavy Metals (as Pb)	ppm	2	—	5	USP <231>
Chloride (Cl^-)	ppm	5	—	30	USP <221>
Sulfate (SO_4^{2-})	ppm	5	—	150.0	USP <221>
Ammonia	ppm	ND	—	20	USP <211>
Loss On Drying	%	0.15	—	0.25	USP <731>

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Fine white crystalline powder, uniform granulation	**Odor**	Odorless
Form	Solid	**Boiling Point**	87°C (189°F)
Melting / Freezing Point	100°C (212°F)	**Solubility**	High water solubility, moderate alcohol compati...
Molecular Formula	$CHKO_3$	**Molecular Weight**	100.115 g/mol
Density (25°C)	1.58 g/mL		

APPLICATIONS

1. **Pharmaceutical** — Potassium Bicarbonate is used to maintain optimal pH levels in various pharmaceutical formulations, ensuring drug stability and efficacy. Its high purity (USP Grade) minimizes the risk of introducing unwanted contaminants into sensitive pharmaceutical products.
2. **Food and Beverage** — In the food industry, Potassium Bicarbonate acts as a leavening agent in baked goods, providing a source of carbon dioxide for rising. It also functions as a pH regulator in food processing, contributing to the desired taste and texture of the final product.
3. **Agriculture** — Potassium Bicarbonate provides a valuable source of potassium for plant growth, promoting healthy development and increased yields. It can also improve soil quality by adjusting the pH, creating a more favorable environment for plant roots.
4. **Water Treatment** — This chemical is utilized to adjust the pH of water in various treatment processes, ensuring optimal conditions for disinfection and preventing corrosion. Maintaining the correct pH is crucial for the effectiveness of water treatment systems.
5. **Cosmetics** — Potassium Bicarbonate can be used as a buffering agent in cosmetic formulations. This helps to maintain the desired pH level, ensuring the stability and effectiveness of the product, as well as preventing skin irritation.
6. **Fire Suppression** — Potassium Bicarbonate is used as a dry chemical fire suppression agent, particularly effective on grease and electrical fires. It works by interrupting the chemical reaction of the fire, quickly extinguishing the flames.

STORAGE & HANDLING

Proper storage of Potassium Bicarbonate is crucial to prevent degradation and maintain its purity. Exposure to moisture can lead to clumping and a reduction in effectiveness. Although this product is not classified as hazardous, following proper storage guidelines is essential to ensure the quality and performance of the material.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent contamination.
- Avoid contact with strong acids or oxidizing agents.
- Ensure proper ventilation when handling to avoid inhalation of dust.
- Wear appropriate personal protective equipment (PPE) such as gloves and safety goggles.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 50 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Warning

No GHS pictograms assigned.

Hazard Statements:

- Not Classified
- Reported as not meeting GHS hazard criteria by 300 of 301 companies (only 0.3% companies provided GHS information). For more detailed information, please visit ECHA C&L website.

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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