

TECHNICAL INFORMATION

SODIUM BICARBONATE USP # 1 POWDER

Revised
March, 2009

CHEMICAL NAME: Sodium Bicarbonate FORMULA: NaHCO ₃ MOLECULAR WEIGHT: 84.01 CAS NAME: Carbonic acid monosodium salt CAS NUMBER: 144-55-8 DESCRIPTION: White, crystalline powder GRADE: USP # 1 Powder	SCREEN ANALYSIS:		
	Cumulative Percent Retained		
	U. S. Std. Sieve No.	Minimum	Maximum
	+ 100	0	2
	+ 200	20	50
	+ 325	60	100
	BULK DENSITY: poured		
	Typical range: 65 to 75 lbs / ft ³		

SPECIFICATIONS AND REQUIREMENTS

	<u>United States Pharmacopoeia</u>	<u>Food Chemical Codex (FCC)</u>
Assay (dry basis)	99.0% - 100.5%	99% min
Insoluble substances	Meets USP test	Passes FCC test
Loss on drying	0.25% max	0.25% max
Ammonia	Meets USP test	Passes FCC test
Arsenic	2-ppm max	
Heavy metals	5-ppm max	2-ppm (as Pb) max
Carbonates	Meets USP test	
Chloride (as Cl)	150-ppm max	
Limit of Sulfur Compound (as SO ₄)	150-ppm max	
Identification	Responds to USP tests for Sodium and Bicarbonate Passes all USP Requirements	Responds in FCC tests for Sodium and Bicarbonate Passes all FCC Requirements

THEORETICAL PROPERTIES: The following properties are provided for convenience and reference only. These properties are not normally tested in the commercial product and no representation is made relative to the commercial product.

THERMAL DECOMPOSITION: Decomposes (without melting) into Na₂CO₃, H₂O, and CO₂
ALKALI EQUIVALENT: 1 lb. NaHCO₃ = 0.369 lb. Na₂O
CARBON DIOXIDE EQUIVALENT: 1 lb. NaHCO₃ = 0.524 lb. CO₂
SPECIFIC GRAVITY: 2.16 g / cm³
SPECIFIC HEAT @ 25 °C: 20.94 cal / deg mol
SOLUBILITY IN WATER @ 60 °C: 16.4 g / 100 g H₂O
SOLUBILITY IN OTHER SOLVENTS: Insoluble in alcohol
HEAT OF FORMATION: - 227.25 K cal / mol
HEAT OF SOLUTION: 3.81 K cal / mol
TASTE: Slightly alkaline

AIB
Compliant



Certified to
ANS/NSF 60
Maximum Use 100 mg/l

PACKAGING:
Multi-wall Paper Bags: 50 lbs. & 25 kg.
Super sacks: 2000 lbs. & 2450 lbs.
Color Code: RED

HANDLING:
Information concerning the handling and use of this product is provided in a material data sheet (MSDS). This MSDS must be fully read and understood prior to any exposure, handling, or use of the product.

APPLICATIONS: Antibiotic manufacturing, cake, pancake, and ready-mixes, candies, catalyst manufacturing, chemicals, dentifrice, explosives, fire extinguishers, food colors, food conditioners, paper making, pharmaceuticals, photography, flour (self-rising), starches.

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