



TECHNICAL INFORMATION

SODIUM BICARBONATE USP #5

NATURAL SODA

Revision Date: 12/15/2015

CHEMICAL NAME: Sodium Bicarbonate
FORMULA: NaHCO₃
MOLECULAR WEIGHT: 84.01
CAS NAME: Carbonic acid monosodium salt
CAS NUMBER: 144-55-8
DESCRIPTION: White, crystalline powder
GRADE: USP # 5 Coarse Granular

SCREEN ANALYSIS:		
Cumulative Percent Retained		
U. S. Std. Sieve No.	Minimum	Maximum
+ 60	0	50
+ 100	50	100
+ 170	80	100

BULK DENSITY: poured
 Typical range: 63 to 75 lbs. / ft³

MEETS THE FOLLOWING FOOD GRADE SPECIFICATIONS

	United States Pharmacopoeia	Food Chemical Codex (FCC)	Other
Assay	99.0% - 100.5%	99.0% - 100.5%	---
pH (3% solution)	---	---	7.8-8.5
Insolubles (Clarity)	Clear solution	Clear solution	---
Moisture	0.25% max	0.25% max	---
Ammonia	20 ppm max	Passes smell test	---
Arsenic	2 ppm max	---	---
Heavy Metals	5 ppm max	---	---
Lead	---	2 ppm max	---
Cadmium	---	---	1 ppm max
Calcium	---	---	100 ppm max
Copper	---	---	1 ppm max
Iron	---	---	2 ppm max
Limit of Sulfur	150 ppm max	---	---
Chloride	150 ppm max	---	---
Appearance	---	---	---
Normal Carbonate	Passes USP Test	---	---
Identification	Responds to Test	Responds to Test	---

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



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

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.

SHELF LIFE: 2 years from manufacturing date

APPLICATIONS: Antacid preparation, carbonated beverage mixes, carpet deodorizers, denture cleansers, detergents, dry bleaches, effervescent salts, and pharmaceuticals (excipient use only)

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