



NATURAL SODA

TECHNICAL INFORMATION

SODIUM BICARBONATE USP #5

Revision Date: 03/16/2015

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

	<u>United States Pharmacopoeia</u>	<u>Food Chemical Codex (FCC)</u>	<u>Other</u>
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	Passes USP test	Passes smell test	---
Arsenic	2 ppm max	---	---
Heavy Metals	5 ppm max	---	---
Lead	---	2 ppm max	---
Cadmium	---	---	1 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.
SHELF LIFE: 2 years from manufacturing date

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

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