



TECHNICAL INFORMATION

SODIUM BICARBONATE U.S.P. Grade #1 POWDER

Revision Date: 12/10/2015

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 Grade # 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 / 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: Cake, pancake, and ready-mixes, candies, catalyst manufacturing, chemicals, dentifrice, explosives, fire extinguishers, food colors, food conditioners, paper making, pharmaceuticals (excipient use only), photography, flour (self-rising), starches.

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