



NATURAL SODA

TECHNICAL INFORMATION

SODIUM BICARBONATE FOOD GRADE NO. 3 FINE POWDER

Revised
December, 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: Food Grade No. 3 Fine Powder	SCREEN ANALYSIS:		
	Cumulative Percent Retained		
	U. S. Std. Sieve No.	Minimum	Maximum
	+ 100	0	1
	+ 200	0	5
	+ 325	10	30
	BULK DENSITY: poured		
	Typical range: 60 to 75 lbs. / ft ³		

SPECIFICATIONS AND REQUIREMENTS

Food Chemical Codex (FCC)

Assay (dry basis)	99% min
Insoluble substances	Passes FCC test
Loss on drying	0.25% max
Ammonia	Passes FCC test
Arsenic	Meets Requirement
Heavy metals	2 ppm (as Pb) max
Carbonates	Meets Requirement
Chloride (as Cl)	≤ 150 ppm possible (above USP Requirements)
Limit of Sulfur Compound (as SO ₄)	Meets Requirement
Identification	Responds in FCC tests for Sodium and Bicarbonate



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:

Baffled
Super sacks: 2000 lbs. and 2450 lbs.

Color Code: BROWN

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: Deodorant powder, pharmaceuticals, dry powder fire extinguishers, rubber and plastic products

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