



NATURAL SODA

TECHNICAL INFORMATION

SODIUM BICARBONATE # 1 TFF FOOD GRADE

Revised
February, 2010

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: No. 1 TFF Food Grade (with Tricalcium phosphate added)

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: 60 to 75 lbs. / ft³

SPECIFICATIONS AND REQUIREMENTS

Food Chemical Codex (FCC)

Assay (dry basis)	99% min
Loss on drying	0.25% max
Ammonia	Passes FCC test
Arsenic	
Heavy metals	2 ppm (as Pb) max
Carbonates	
Chloride (as Cl)	
Limit of Sulfur Compound (as SO ₄)	
Identification	Responds in FCC tests for Sodium and Bicarbonate
Free Flowing Agent	0.5 % (+/- 0.2%)
Quality	Meets FCC requirements except for insoluble substances because of the presence of Tricalcium Phosphate as a flow aid



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. and 25 kg.
 Super sacks: 2000 lbs. and 2450 lbs.

Color Code: ORANGE

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: Baking mixes, fire extinguishers, self-rising flour, sponge rubber and plastics

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