



NATURAL SODA

# TECHNICAL INFORMATION

## SODIUM BICARBONATE FOOD GRADE NO. 3 FINE POWDER

Revised  
December, 2009

<b>CHEMICAL NAME:</b>	Sodium Bicarbonate
<b>FORMULA:</b>	NaHCO <sub>3</sub>
<b>MOLECULAR WEIGHT:</b>	84.01
<b>CAS NAME:</b>	Carbonic acid monosodium salt
<b>CAS NUMBER:</b>	144-55-8
<b>DESCRIPTION:</b>	White, crystalline powder
<b>GRADE:</b>	Food Grade No. 3 Fine Powder

<b>SCREEN ANALYSIS:</b>		
<b>Cumulative Percent Retained</b>		
<b>U. S. Std. Sieve No.</b>	<b>Minimum</b>	<b>Maximum</b>
+ 100	0	1
+ 200	0	5
+ 325	10	30

**BULK DENSITY: poured**  
Typical range: 60 to 75 lbs. / ft<sup>3</sup>

### 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 <sub>4</sub> )	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.

<b>THERMAL DECOMPOSITION:</b>	Decomposes (without melting) into Na <sub>2</sub> CO <sub>3</sub> , H <sub>2</sub> O, and CO <sub>2</sub>
<b>ALKALI EQUIVALENT:</b>	1 lb. NaHCO <sub>3</sub> = 0.369 lb. Na <sub>2</sub> O
<b>CARBON DIOXIDE EQUIVALENT:</b>	1 lb. NaHCO <sub>3</sub> = 0.524 lb. CO <sub>2</sub>
<b>SPECIFIC GRAVITY:</b>	2.16 g / cm <sup>3</sup>
<b>SPECIFIC HEAT @ 25 °C:</b>	20.94 cal / deg mol
<b>SOLUBILITY IN WATER @ 60 °C:</b>	16.4 g / 100 g H <sub>2</sub> O
<b>SOLUBILITY IN OTHER SOLVENTS:</b>	Insoluble in alcohol
<b>HEAT OF FORMATION:</b>	- 227.25 K cal / mol
<b>HEAT OF SOLUTION:</b>	3.81 K cal / mol
<b>TASTE:</b>	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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