



TECHNICAL INFORMATION

SODIUM BICARBONATE # 1 TFF FOOD GRADE

Revision Date: 12/10/2015

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: No. 1 TFF Food Grade (with Tricalcium phosphate added)	SCREEN ANALYSIS: Cumulative Percent Retained <table style="margin: auto;"> <thead> <tr> <th style="text-decoration: underline;">U. S. Std. Sieve No.</th> <th style="text-decoration: underline;">Minimum</th> <th style="text-decoration: underline;">Maximum</th> </tr> </thead> <tbody> <tr> <td>+ 100</td> <td>0</td> <td>2</td> </tr> <tr> <td>+ 200</td> <td>20</td> <td>50</td> </tr> <tr> <td>+ 325</td> <td>60</td> <td>100</td> </tr> </tbody> </table> BULK DENSITY: poured Typical range: 60 to 75 lbs. / ft ³	U. S. Std. Sieve No.	Minimum	Maximum	+ 100	0	2	+ 200	20	50	+ 325	60	100
U. S. Std. Sieve No.	Minimum	Maximum											
+ 100	0	2											
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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*	Passes USP test	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	---	---
Appearance*	---	---	---
Normal Carbonate*	Passes USP Test	---	---
Identification*	Responds to Test	Responds to Test	---

(*tests done prior to Tricalcium phosphate added)

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:

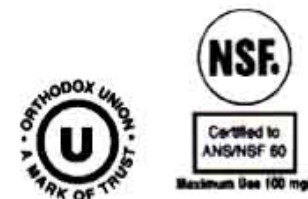
- 227.25 K cal / mol

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.

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

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