Arm & Hammer™ Sodium Bicarbonate USP No. 1 Powdered

Description
Sodium Bicarbonate contains not less than 99.0 percent and not more than 100.5 percent of NaHCO₃ calculated on the dried basis.

A white crystalline powder. It is stable in dry air, but slowly decomposes in moist air. Its solutions, when freshly prepared with cold water, without shaking, are alkaline to litmus. The alkalinity increases as the solutions stand, are agitated or are heated.

Assay – dry basis
USP Not less than 99.0% and not more than 100.5% of NaHCO₃ after drying

Identification
USP <191> Meets the requirements of the tests for sodium and bicarbonate.

A 1 in 10 solution gives positive tests for sodium and for bicarbonate.

Insoluble Substances
USP Dissolve 1 g in 20 ml of water; the resulting solution is complete and clear.

Passes test

Normal Carbonate
USP Meets test.

Chloride
USP <221> Not more than 0.015%

Not more than 0.015% by weight

Limit of Sulfur Compounds
USP Not more than 0.015%

Elemental Impurities
ICP

Cadmium
Not more than 0.5 µg/g

Lead
Not more than 2 mg/Kg

Not more than 0.5 µg/g

Arsenic
Not more than 1.5 µg/g

Mercury
Not more than 1 µg/g

Not more than 0.25% by weight

Limit of Ammonia
NA – See remarks Not more than 20 ppm

Limit on Drying
USP <731> Not more than 0.25%

Ammonia is not used in the manufacturing process for Church & Dwight Sodium bicarbonate. Controlled handling and storage of the product insure that ammonia will not exceed the USP limit. Absence of ammonia is confirmed on each lot via olfactory test.

Residual Solvents testing under USP <467> is not required as no solvents, and specifically no solvents of Class 1, 2, 3 or Table 4 as defined in <467>, are used in the manufacture or purification of Church & Dwight Sodium Bicarbonate.

Granulation (Powdered)

<table>
<thead>
<tr>
<th>Sieve Size (USS)</th>
<th>Microns</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>149</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>200</td>
<td>74</td>
<td>20</td>
<td>45</td>
</tr>
<tr>
<td>325</td>
<td>44</td>
<td>60</td>
<td>100</td>
</tr>
</tbody>
</table>

CHURCH & DWIGHT CO., INC
469 North Harrison Street • Princeton, NJ 08543-6297 • 800.221.0453 • www.ahperformance.com
## General Properties (Not Specifications)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empirical Formula</td>
<td>NaHCO₃</td>
</tr>
<tr>
<td>CAS Number</td>
<td>144-55-8</td>
</tr>
<tr>
<td>Other Names</td>
<td>Bicarbonate of Soda</td>
</tr>
<tr>
<td></td>
<td>Sodium Hydrogen Carbonate</td>
</tr>
<tr>
<td></td>
<td>Baking Soda</td>
</tr>
<tr>
<td>Chemical Abstract Name</td>
<td>Carbonic acid monosodium salt</td>
</tr>
<tr>
<td>E Number</td>
<td>E-500(ii)</td>
</tr>
<tr>
<td>Appearance</td>
<td>White crystalline powder</td>
</tr>
<tr>
<td>Taste</td>
<td>Slightly alkaline</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>84.01</td>
</tr>
<tr>
<td>Thermal Decomposition</td>
<td>Decomposes without melting into Na₂CO₃, H₂O and CO₂.</td>
</tr>
<tr>
<td>Crystal Density</td>
<td>137.3 lb/ft³, 2.2 g/cc</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>63 lb/ft³, 1.009 g/cc</td>
</tr>
<tr>
<td>BTU / lb at 72°F</td>
<td>0.249</td>
</tr>
<tr>
<td>Solubility in water at 77°F</td>
<td>Approximately 9.5%</td>
</tr>
<tr>
<td>Solubility in Alcohol</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Alkali Equivalent</td>
<td>1 lb NaHCO₃ = 0.369 lb Na₂O</td>
</tr>
<tr>
<td>Acid Equivalent</td>
<td>1 lb NaHCO₃ = 0.435 lb HCl</td>
</tr>
<tr>
<td>Carbon Dioxide Equivalent</td>
<td>1 lb NaHCO₃ = 0.524 lb CO₂</td>
</tr>
<tr>
<td>pH 1% aqueous soln at 77°F</td>
<td>Approximately 8.3.</td>
</tr>
</tbody>
</table>