

Sodium Bicarbonate

CAS 144-55-8 · NaHCO_3 · Technical grade

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1. Product identity

Product name	Sodium Bicarbonate
Synonyms	baking soda, bicarb, sodium hydrogen carbonate, edible soda, sodium bicarbonate powder
C.A.S. number	144-55-8 (EC 205-633-8)
Molecular formula	NaHCO_3
Molecular weight	84.0 (ILO ICSC 1044); producer sheets give 84.01 and 84.05
Grade supplied against	Technical grade
Appearance	White, odourless fine crystalline powder or small crystals with a slightly saline, alkaline taste
Product group	Alkalis & Bases
HSN code	2836 30 00
Country of origin	As stated on the producer's documents for the lot supplied; confirmed at offer stage
Packing	25 / 50 kg bag
Storage	Store in closed original bags or containers in a cool, dry, well-ventilated place, protected from moisture and from excessive heat - keep well below 50 C, the temperature at which decomposition begins. Store away from acids and from ammonium compounds, and away from strong-smelling materials, solvents and fuels, which the powder absorbs readily and which will ruin a food- or pharma-grade consignment. Keep bags off damp floors, do not stack where condensation can reach them, and rotate stock; assay falls slowly in humid storage. For a technical grade destined for a food or feed customer, segregate from non-food chemicals entirely.

2. Analytical specification

S. No.	Test parameter	Specification	Method
1	Description	White, odourless fine crystalline powder or small crystals with a slightly saline, alkaline taste	Visual
2	Identification	Conforms to the substance supplied	Instrumental or chemical test, per method agreed
3	Assay / grade	Technical grade	Titrimetry or instrumental, per method agreed
4	Physical state	Solid (crystalline powder)	Visual

S. No.	Test parameter	Specification	Method
5	Solubility in water	Soluble - 9.3 g/100 mL (93 g/L) at 20 C (ILO ICSC 1044); producer data 88-96 g/L at 20 C. Solubility rises with temperature, but heating the solution drives off carbon dioxide and converts it progressively to sodium carbonate, so a hot solution is no longer pure bicarbonate.	Per the test method agreed
6	pH	8.3 in a 1% w/v aqueous solution at 25 C; 8.6 in a 5% solution (producer data). Mildly alkaline and self-buffering. Always state the concentration - the two figures are the same product measured differently, not a quality difference.	Potentiometry on an aqueous suspension
7	Relative density	Relative density about 2.1-2.2 g/cm ³ (true density; ILO ICSC 1044 gives 2.1 g/cm ³). Bulk density depends entirely on grade and granulation - a US producer quotes 66 lb/ft ³ (about 1060 kg/m ³) for a standard grade, while light and fine technical powders are considerably lower. Use the producer's figure for the specific grade in silo and packaging calculations.	Pyknometry or gas displacement
8	Melting / freezing point	Not applicable - it decomposes rather than melting. ILO ICSC 1044: begins to decompose at about 50 C and decomposes completely at 270 C, giving off carbon dioxide and water and leaving sodium carbonate. One producer sheet lists 270 C as a 'melting point'; that is the decomposition temperature and should not be published as a melting point.	Thermal analysis
9	Boiling point	Not applicable	Distillation range
10	Flash point	Not flammable - sodium bicarbonate is itself a fire-extinguishing agent and is the active powder in BC dry-powder extinguishers	Not applicable — the substance is not combustible
11	Additional parameters	To the specification agreed before order	As agreed

3. Transport classification

Not regulated for transport · Class Not applicable - not a dangerous good under ADR, IMDG, IATA, DOT or TDG · Packing group Not applicable

Proper shipping name: Not applicable - not regulated for transport

What this document is. This is a product specification sheet. It states the grade this material is supplied against, its packing and its identity. **It is not a certificate of analysis, it carries no test results, and it certifies no batch.** Tested values for the consignment actually loaded appear on the batch certificate of analysis issued against that batch, which travels with the despatch documents. Identity and physical data are drawn from PubChem, the ECHA CLP inventory and ILO safety cards; the producer's documents for the grade quoted govern. Velora Chemicals Private Limited is a bulk supplier and trader, not a manufacturer.