

Technical Data

Sodium Bicarbonate

USP Powdered No. 1

Meets United States Pharmacopeia and Food Chemicals Codex Specifications

Formula	NaHCO ₃
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Molecular Weight	84.01
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Chemical Abstract Services

Name	Carbonic Acid Monosodium Salt
Number	144-55-8

Particle Size Distribution

Screen Size	Cumulative % Retained	
	Minimum	Maximum
USS 100 (150 μm)	0	2
USS 200 (75 μm)	20	45
USS 325 (45 μm)	60	100

General Properties

Typical bulk density, lb/ft ³ (kg/m ³)	66 (1057)
Particle density, g/cm ³	2.22
pH of 1% solution @ 25°C (77°F)	8.3
Appearance	White crystalline powder
Thermal decomposition	Decomposes (without melting) into Na ₂ CO ₃ , H ₂ O, and CO ₂

Specifications and Requirements

	USP	FCC
Assay (dry basis)	99.0% - 100.5%	99% minimum
Insoluble substances	Meets USP requirement	Passes FCC test
Loss on drying	0.25% max	0.25% max
Ammonia	Meets USP requirement	Passes FCC test
Arsenic	2 ppm max	3 ppm max (as As)
Heavy metals	5 ppm max	5 ppm max (as Pb)
Carbonate	Meets USP requirement	No FCC requirement
Chloride (as Cl ⁻)	150 ppm max	No FCC requirement
Sulfur Compounds	150 ppm max	No FCC requirement
Organic volatile impurities	Meets USP requirement	No FCC requirement
Identification	Responds to USP tests for sodium and bicarbonate	Positive in FCC tests for sodium and bicarbonate

Standard Containers	50 lb (22.7 kg) bags One ton super sacks Bulk hopper cars and trucks
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