

PRODUCT SPECIFICATION

DATE OF ISSUE
01-04-2025

SODIUM BICARBONATE (E500)

PRODUCT
CODE: 01



T010225M070325A270722

1. PRODUCT IDENTIFICATION

1.1 Supplier product information

Product name	Baking soda, sodium bicarbonate		
Product code	01		
Product number	Content	EAN	Packaging
1500	100g	8718309830014	Plastic jar and screw lock cap with warranty seal.  Jar =  Cap =
1501	250g	8718309830021	
1507	1kg	8718309830038	
1716	5,5kg	8718309832339	Plastic bucket with warranty closure.  Bucket =  Lid =
1533	12,5kg	8718309830878	Blue bag =  in box
1592	25kg	8718309831004	

1.2 Scientific product information

Single ingredient		
Main use	Leavening agent / raising agent, acidity regulator, anti-caking agent	
Chemical name	Sodium bicarbonate, sodium hydrogen carbonate	
Chemical formula	NaHCO ₃	
Production method	Sodium bicarbonate is prepared by the Solvay process, which is the reaction of calcium carbonate, sodium chloride (salt), ammonia, and carbon dioxide in water. In this process, carbon dioxide (CO ₂) passes through a concentrated aqueous solution of sodium chloride (NaCl) and ammonia (NH ₃): NaCl + CO ₂ + NH ₃ + H ₂ O → NaHCO ₃ + NH ₄ Cl Sodium bicarbonate (baking soda) precipitates out of the solution.	

1.3 Legislative product information

CAS number	144-55-8	HS code (customs)	2836 30 00
EU food additive	E500(ii)		
Country of Origin	Germany		
Organic products	For the purposes of Article 19(2)(b) of Regulation (EC) No 834/2007, sodium bicarbonate may be used in the manufacture of processed organic foods.		

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2. PRODUCT INFORMATION

2.1 Physical and Chemical properties

	Unit	Specification	Method
Appearance		Crystalline powder	
Colour		White	
Odour/taste		Odourless	
Assay	%	99,0 – 100,5	
Density	kg/dm ³	2,218	
Free flowing density	kg/dm ³	1,10	
Molecular weight		84	
Solubility	g/l	96	20°C H ₂ O
Solubility	g/l	insoluble in alcohol	
Insoluble substances		clear	
Assay (total alkalinity, NaHCO ₃)	%	99,0 – 100,5 100,3 typical value	
Loss on drying	%	≤ 0,25 ≤ 0,01 typical value	
Decomposition temperature	°C	60	
pH		8,0 - 8,6 8,2 typical value	1% in H ₂ O
Sieve analysis:			
< 0,2mm	%	≥ 80 100 typical value	
< 0,063mm	%	≥ 40 17 typical value	

2.3 Chemical analyses

Ammonium salts		no odor	
Arsenic (As)	ppm	≤ 2 < 0,1 typical value	
Mercury (Hg)	ppm	≤ 1 < 0,1 typical value	
Lead (Pb)	ppm	≤ 2 < 0,1 typical value	

2.4 Nutritional Information

2.4.1 Nutritional Values

Energy	kJ/100g	-	
Energy	kcal/100g	-	

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NATUURLIJK
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special food ingredients

Protein	g/100g	0	
Carbohydrate:	g/100g	0	
Of which Sugars	g/100g	0	
Polyols	g/100g	0	
Starches	g/100g	0	
Others	g/100g	0	
Fat:	g/100g	0	
Of which Saturated	g/100g	0	
Mono-unsaturated	g/100g	0	
Poly-unsaturated	g/100g	0	
Transfatty acids	g/100g	0	
Cholesterol	mg/100g	0	
Water	g/100g	< 0,1	
Organic acid	g/100g	-	
Dietary fiber	g/100g	-	

2.4.2 Minerals

Sodium (Na)	mg/100g	≈27074	Calculated
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3. FOOD INTOLERANCE

3.1 Allergens

Yes = ✓ / No = ✗	Contains
Eggs and products thereof	✗
Cereals containing gluten and products thereof	✗
Lupin and products thereof	✗
Milk and products thereof (including Lactose)	✗
Sesame seeds and products thereof	✗
Nuts and products thereof (almonds, hazelnuts, walnuts, cashews, pecan nuts, Brazil nuts, pistachios, macadamia nuts)	✗
Sulphur dioxide and sulphites (>10mg/kg or >10mg/l)	✗
Celery and products thereof	✗
Peanuts and products thereof	✗
Mustard and products thereof	✗
Fish and products thereof	✗

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Molluscs and products thereof				X	
Soy and products thereof				X	
Crustacea and products thereof				X	
3.2 Suitability for other diets:					
Coeliacs	✓	Lactose intolerant	✓		
Halal	✓	Vegans	✓		
Kosher	✓	Vegetarian	✓		
3.3 GMO Declaration:					
Sodium bicarbonate does not contain genetically modified organisms and is not produced using raw materials of a genetically modified origin. At no stage during production does the product comes into contact with genetically modified organisms.					
3.4 Irradiation:					
Sodium bicarbonate is not treated with ionizing radiation .					
3.5 BSE/TSE declaration:					
The used ingredients for Sodium bicarbonate are not of animal origin. The processing equipment and the packing material which is used to manufacture, pack or fill the products into the packing units do not come into contact with any meat or meat-by product.					
4. STORAGE CONDITIONS					
Storage conditions	In closed original packaging. Must be kept cool and dry in a well-ventilated place.				
Shelf life	60 months after production, under the above mentioned conditions.				
5. FOOD SAFETY					
5.1 Hygiene:					
This product is produced in a facility wit an on HACCP based food safety system.					
5.2 Identifications of dangers:					
Classification of the substance (Regulation (EC) No 1272/2008)		Not classified. (non-hazardous)			
6. EXTENDED PRODUCT INFORMATION					
6.1 Usage					
Sodium bicarbonate (Baking Soda) is used in cooking (baking) as a raising agent. With baking it reacts with sour components to release carbon dioxide, that helps dough "rise". The acidic compounds that induce this reaction include, tartaric acid, lemon juice, yogurt, buttermilk, cocoa, vinegar, honey, invert sugar, etc. Sodium bicarbonate can be substituted for baking powder provided sufficient acid reagent is also added to the recipe. Many forms of baking powder contain sodium bicarbonate combined with tartaric acid or cream of tartar.					
Above 60°C, sodium bicarbonate gradually decomposes into sodium carbonate, water and carbon dioxide. The conversion is fast at 200°C: $2 \text{ NaHCO}_3 \rightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O} + \text{CO}_2$					

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So Sodium bicarbonate can also be used by itself as a leavening agent. Although this is not recommended as not all carbon dioxide is released and the baked product becomes alkaline (gets a soapy flavor).

The neutralisation ratio of baking soda with different acid ingredients (acid : baking soda):
Cream of tartar 2,2 : 1, Citric acid 0,76 : 1, Tartaric acid 0,89 : 1 .

By neutralisation is meant the chemical reaction of the alkaline baking soda with an acid (acid carrier) to form a neutral salt, carbon dioxide and water. By using this exact value the pH of the baked product is not changed and the maximum amount of carbon dioxide is released.

Dosage as leavening agent in pastry: 6gram (1,2%) on 500grams of flour.

6.2 Dictionary

NL	The Netherlands	Natriumbicarbonaat (bicarbonaat, zuiveringszout, maagzout, bakpoeder, bakzout, dubbelkoolzure soda, Natriumwaterstofcarbonaat, Natriumcarbonaten)
GB	Great Britain (UK)	Sodium Bicarbonate (Sodium hydrogen carbonate, Bicarbonate of soda, Baking soda, Nahcolite, Sodium carbonates)
DE	Germany	Natriumcarbonate (Natriumsalz, Kohlensäure, doppeltkohlensaures, Natron, Natriumhydrogencarbonat, Speisesoda, Backsoda, Speisenatron, Kaisernatron, Natriumbicarbonat)
FR	France	Bicarbonate de Sodium (L'hydrogénocarbonate de sodium, bicarbonate de sodium, carbonate monosodique, bicarbonate de soude, carbonate acide de sodium, Carbonates de sodium)
ES	Spain	Bicarbonato de Sodio (bicarbonato sódico, hidrogenocarbonato de sodio, carbonato ácido de sodio, Carbonatos de sodio)
PT	Portugal	Bicarbonato de Sódio (hidrogenocarbonato de sódio, Carbonatos de sódio)
IT	Italy	Bicarbonato di Sodio (L'idrogenocarbonato di sodio, carbonato acido di sodio, carbonato monosodico, Carbonati di sodio)
DK	Denmark	Natriumbicarbonat (Natron, Natriumhydrogencarbonat, Natriumcarbonater)
NO	Norway	Natriumbikarbonat (Natron, Natriumhydrogencarbonat)
SE	Sweden	Natriumkarbonater
FI	Finland	Natriumbikarbonaatti (natriumvetykarbonaatti, natriumkarbonaatiksi, Natriumkarbonaatit)
IS	Iceland	Natríumkarbónat (Natríumvetniskarbónat)
CZ	Czech Republic	Hydrogenuhlíčitán Sodný (jedlá soda, soda bicarbona, Uhlíčitany sodné)
SK	Slovak Republic	Hydrogénuhlíčitán Sodný (jedlá sóda, sóda bikarbóna, uhličitany sodíka)
HU	Hungary	Nátriumbikarbonát

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		(Nátrium-hidrogénkarbonát, nátrium-bikarbóna, kettedszénsavas szikeny, szódabikarbóna, Nátrium-karbonátok)
HR	Croatia (Hrvatska)	Natrijev hidrogenkarbonat (soda bikarbona)
GR	Greece	Ανθρακικά άλατα νατρίου
SI	Slovenia	Natrijev hidrogenkarbonat (Natrijevi karbonati)
PL	Poland	Wodorowęglan Sodu (sodium hydrogen carbonate, soda oczyszczona, kwaśny węglan sodu, bikarbonat, dwuwęglan sodu, Węglany sodu)
RO	Romania	Bicarbonat de sodium (Carbonați de sodiu)
BG	Bulgaria	Натриеви карбонати
RU	Russian Federation	Карбонаты натрия
TR	Turkey	Sodyum bikarbonat (Sodyumbikarbonatın)

7. DISCLAIMER

Although we take great care in setting up this product specification, we cannot accept any liability for the completeness and fully accurateness of the information provided. The content of this Product Specification is completed to the best of our knowledge.

This document does not dismiss the user of his legal obligations with respect to food safety.

This product specification replaces any previously issued specifications.