

PRODUCT SPECIFICATION

DATE OF ISSUE
08-02-2021

SODIUM BICARBONATE (E500)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1500, X1501, X1507, X1533, X1592

PRODUCTION:
11012601



1. PRODUCT IDENTIFICATION

1.1 Supplier product information

Product name	Baking soda, sodium bicarbonate		
Production	Batch number	BVA012209	
	Manufacturing date	2017-09-16	
Product code	Content	EAN	Packaging
X1500	100g	8718309830014	Plastic jar and screw lock cap with warranty seal. Jar =  Cap = 
X1501	250g	8718309830021	
X1507	1kg	8718309830038	
X1533	12,5kg	8718309830878	Blue bag =  in box
X1592	25kg	8718309831004	

1.2 Scientific product information

Single ingredient			
Main use	Leavening agent, acidity control		
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): $\text{NaCl} + \text{CO}_2 + \text{NH}_3 + \text{H}_2\text{O} \rightarrow \text{NaHCO}_3 + \text{NH}_4\text{Cl}$ Sodium bicarbonate (baking soda) precipitates out of the solution.		

1.3 Legislative product information

CAS number	144-55-8		
EU food additive	E500(ii)		
Country of Origin	Belgium		
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.		

2. PRODUCT INFORMATION

2.1 Physical and Chemical properties

	Unit	Specification	Method
Appearance		Crystalline powder	
Colour		White	

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Odour/taste		Odourless	
Assay	wt%	99,0 – 100,5	
Purity	%	99,0	
Free flowing density	kg/dm ³	1,02	
Molecular weight		84,0066	
Solubility	g/l	100	20°C H ₂ O
Solubility	g/l	insoluble in alcohol	
Total alkalinity (NaHCO ₃)	%	100,1	
Decomposition temperature	°C	60	
Melting point	°C	270	
pH		8,2	1% in H ₂ O
Sieve analysis:			
< 0,2mm	%	99,9	
< 0,063mm	%	32,5	

2.3 Chemical analyses

Arsenic (As)	ppm	<0,4	
Mercury (Hg)	ppm	<0,004	
Lead (Pb)	ppm	<0,4	

2.4 Nutritional Information

2.4.1 Nutritional Values

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

NATUURLIJK NATUURLIJK
special food ingredients
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Poly-unsaturated	g/100g	0	
Transfatty acids	g/100g	0	
Cholesterol	mg/100g	0	
Water	g/100g	≤ 0,25	
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	Direct Contamination	Cross-Contamination (Risk)
Barley	✗	✗	✗
Beef	✗	✗	✗
Cacao	✗	✗	✗
Carrot	✗	✗	✗
Celery and celery products	✗	✗	✗
Cereals containing gluten and products produced with these (wheat, rye, oats, spelt, barley)	✗	✗	✗
Chicken	✗	✗	✗
Coriander	✗	✗	✗
Crustaceans and Shellfish	✗	✗	✗
Eggs and egg products	✗	✗	✗
Fish and fish products	✗	✗	✗
Glutamate	✗	✗	✗
Lupin and products thereof	✗	✗	✗
Milk and milk products (including Lactose)	✗	✗	✗
Molluscs and products thereof	✗	✗	✗

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Mustard and mustard products	X	X	X
Nuts and nut products (almonds, hazelnuts, walnuts)	X	X	X
Peanuts and peanut products	X	X	X
Pork	X	X	X
Sesame and sesame products	X	X	X
Soybean and soybean products	X	X	X
Sulphite (E221 – E228)	X	X	X
Sulphur dioxide (>10mg/kg)	X	X	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 with 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)
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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: $2 \text{ NaHCO}_3 \rightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O} + \text{CO}_2$
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)

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SE	Sweden	Natriumkarbonater
FI	Finland	Natriumbikarbonaatti (natriumvetykarbonaatti, natriumkarbonaatiksi, Natriumkarbonaatit)
IS	Iceland	Nátríumkarbónat (Nátríumvetniskarbónat)
CZ	Czech Republic	Hydrogenuhličitan Sodný (jedlá soda, soda bicarbona, Uhličitaný sodné)
SK	Slovak Republic	Hydrogénuhličitan Sodný (jedlá sóda, sóda bikarbóna, uhličitaný sodíka)
HU	Hungary	Nátriumbikarbonát (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 Sodny (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 (Sodyumbikarbonatin)

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.