

PRODUCT SPECIFICATION

DATE OF ISSUE
20-12-2022

AMMONIUM BICARBONATE (E503)




NATUURLIJK NATUURLIJK PRODUCT CODE:
X1512, X1506, X1511, X1534

PRODUCTION:
11072307

NATUURLIJK
NATUURLIJK
special food ingredients

1. PRODUCT IDENTIFICATION

1.1 Supplier product information

Product name	Ammonium bicarbonate		
Production	11072307		
Product code	Content	EAN	Packaging
X1512	80g	8718309830137	Plastic jar and screw lock cap with warranty seal. Jar =  Cap = 
X1506	200g	8718309830144	
X1511	900g	8718309830151	
X1534	12,5kg	8718309830823	Blue bag =  in box

1.2 Scientific product information

Combined ingredient		
Main use	Raising agent	
Composition	In descending order of weight; Ammonium bicarbonate (99,45%), magnesium carbonate	
Ingredients	Ammonium bicarbonate (99,45%)	Magnesium carbonate (0,55%)
Chemical name	Ammonium bicarbonate, Ammonium hydrogen carbonate	Magnesium carbonate
Chemical formula	NH ₄ HCO ₃	MgCO ₃
		Magnesium carbonate is a technical additive (Anti-caking agent) and has no technical or functional effect in the finished product after processing. And will be present in insignificant levels in the finished product. Therefore it does not have to be declared in the ingredient list.
Production method	Ammonium bicarbonate is prepared by passing carbon dioxide into an ammonium solution. The bicarbonate precipitates and is washed and dried.	

1.3 Legislative product information

CAS number	1066-33-7	235-192-7
EU food additive	E503ii	E504
Country of Origin	Germany	
Organic products	For the purposes of Article 19(2)(b) of Regulation (EC) No 834/2007, Ammonium bicarbonate may be used in the manufacture of processed organic foods.	

PRODUCT SPECIFICATION

DATE OF ISSUE
20-12-2022

AMMONIUM BICARBONATE (E503)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1512, X1506, X1511, X1534

PRODUCTION:
11072307

NATUURLIJK
NATUURLIJK
special food ingredients

2. PRODUCT INFORMATION

2.1 Physical and Chemical properties

	Unit	Specification	Method
Appearance		Fine crystalline powder	
Colour		White	
Odour/taste		Slight smell of ammonium	
Purity	%	99,5	FCC-Method (calc)
Bulk density	kg/m ³ (20°C)	≈ 850	
Molecular weight		79,0553	
Solubility	g/l (20°C)	220	In water
pH		7,7	10% (m), 20°C
Thermal decomposition		> 30°C	

2.2 Microbiological data

Total plate count	Cfu/g	≤ 1	
Moulds	Cfu/g	≤ 1	
Yeasts	Cfu/g	≤ 1	
E Coli		Negative	
Salmonella		Negative	
Enterobacteriaceae		Negative	
Coliforms		Negative	
Staphylococcus aureus		Negative	
Pseudomonas aeruginosa		Negative	

2.3 Chemical analyses

Iron (Fe)	mg/kg	0,1	ICP-OES
Arsenic (As)	mg/kg	< 1	ICP-OES
Lead (Pb)	mg/kg	< 1	ICP-OES
Cadmium (Cd)	mg/kg	< 1	ICP-OES
Mercury (Hg)	mg/kg	< 0,1	ICP-OES
Chloride (Cl)	mg/kg	< 30	FCC
Heavy metals	mg/kg	< 3	FCC
Sulphate (SO ₄ ²⁻)	mg/kg	< 30	FCC

PRODUCT SPECIFICATION

DATE OF ISSUE
20-12-2022

AMMONIUM BICARBONATE (E503)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1512, X1506, X1511, X1534

PRODUCTION:
11072307

NATUURLIJK
NATUURLIJK

special food ingredients

2.4 Nutritional Information

2.4.1 Nutritional Values

Energy	kJ/100g	0	
Energy	kcal/100g	0	
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	
Organic acid	g/100g	0	

2.4.2 Minerals

Sodium	mg/100g	-	
Calcium	mg/100g	-	
Ferrous	mg/100g	≤ 0,3	
Chlorine	mg/100g	≤ 3	
Others	mg/100g	-	

3. FOOD INTOLERANCE

3.1 Allergens

Yes = ✓ / No = ✗	Contains	Direct Contamination	Cross-Contamination (Risk)
Barley	✗	✗	✗
Beef	✗	✗	✗
Cacao	✗	✗	✗

PRODUCT SPECIFICATION

DATE OF ISSUE
20-12-2022

NATUURLIJK
NATUURLIJK
special food ingredients

AMMONIUM BICARBONATE (E503)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1512, X1506, X1511, X1534

PRODUCTION:
11072307

Carrot	X	X	X
Celery and celery products	X	X	X
Cereals containing gluten and products produced with these (wheat, rye, oats, spelt, barley)	X	X	X
Chicken	X	X	X
Coriander	X	X	X
Crustaceans and Shellfish	X	X	X
Eggs and egg products	X	X	X
Fish and fish products	X	X	X
Glutamate	X	X	X
Lupin and products thereof	X	X	X
Milk and milk products (including Lactose)	X	X	X
Molluscs and products thereof	X	X	X
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	✓

PRODUCT SPECIFICATION

DATE OF ISSUE
20-12-2022

AMMONIUM BICARBONATE (E503)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1512, X1506, X1511, X1534

PRODUCTION:
11072307

NATUURLIJK
NATUURLIJK
special food ingredients

Kosher



Vegetarian



3.3 GMO Declaration:

Ammonium 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 come into contact with genetically modified organisms.

3.4 Irradiation:

Ammonium bicarbonate is not treated with ionizing radiation.

3.5 BSE/TSE declaration:

The used ingredients for Ammonium 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.

3.6 Residual Solvents:

Ammonium bicarbonate fully complies with the ICH requirements regarding residual solvents. No solvents are likely to be present.

4. STORAGE CONDITIONS

Storage conditions	In closed original packaging. Must be kept cool and dry in a well-ventilated place. Prevent temperatures above 30°C.
Shelf life	18 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)	Acute toxicity, oral, Category 4
--	----------------------------------

5.3 Labeling, directions for use:

5.3.2 Hazards identification:

Hazard pictogram	
Signal Word	Warning
Hazard Statements	H302:Harmful if swallowed.
Hazardous components for labeling	Contains: Ammonium hydrogen carbonate

5.3.3 Safety Recommendation:

Prevention	P270:Do not eat, drink or smoke when using this product. P264:Wash hands thoroughly after handling.
------------	--

PRODUCT SPECIFICATION

DATE OF ISSUE
20-12-2022

AMMONIUM BICARBONATE (E503)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1512, X1506, X1511, X1534

PRODUCTION:
11072307

NATUURLIJK
NATUURLIJK
special food ingredients

Response	P312: Call a POISON CENTER or doctor/physician if you feel unwell. P301+P330: IF SWALLOWED: Rinse mouth.
Disposal	P501: Dispose of contents/container to hazardous or special waste collection point.

6. EXTENDED PRODUCT INFORMATION

6.1 Usage

Ammonium bicarbonate or short ammonium, (and Hartshorn salt or baker's ammonia), is used as a leavening agent, in the baking of cookies and other edible treats. It gives an explosive and fast leavening for baked goods that are baked for a short time like cookies. Ammonium carbonate is especially suited to thin, dry cookies. When heated it releases ammonia, carbon dioxide gases, and water. Thin cookies allow the ammonia to be completely baked out, rather than remaining behind, as it would in a thicker mass.

Limitation: Ammonium bicarbonate tend to be used only in thin products with a final moisture content below 5%. Products outside these constraints, such as cakes or soft cookies, can retain ammonia within the final product with an adverse impact on Quality.

Dosage for baking: 1tsp (4g) on 500 grams of flour.

Ammonium bicarbonate decomposes at 60°C and does not leave any flavor affecting residues while having highest leavening properties.

Chemical reaction when heated:

Ammonium bicarbonate = ammonia + water + carbon dioxide

$NH_4HCO_3 = NH_3 + H_2O + CO_2$

6.2 Dictionary

NL	The Netherlands	Ammoniumbicarbonaat (Ammoniumwaterstofcarbonaat, Bakkers ammonium, Ammoniumcarbonaat)
GB	Great Britain (UK)	Ammonium bicarbonate (Ammonium hydrogen carbonate, Ammonium bicarbonate, Bicarbonate of ammonia, Hartshorn, Baking ammonia, ammonium hydrogen carbonate, powdered baking ammonia, bicarbonate salt of ammonia, Carbonic acid, monoammonium salt)
DE	Germany	Ammoniumcarbonate, Bäckerammoniak (Ammoniumbicarbonat, Ammoniumhydrogencarbonat, Hirschhornsalz, ABC-Trieb)
FR	France	Bicarbonate d'ammonium
ES	Spain	Bicarbonato de amonio
PT	Portugal	Hidrogenocarbonato de amónio
IT	Italy	Bicarbonato d'ammonio (Idrogenocarbonato d'ammonio)
DK	Denmark	Ammoniumbicarbonat (Ammoniumhydrogencarbonat)
NO	Norway	Aammoniumhydrogenkarbonat
SE	Sweden	ammoniumbikarbonat (Ammoniumvätekarbonat)
FI	Finland	Ammoniumvetykarbonaatti

PRODUCT SPECIFICATION

DATE OF ISSUE
20-12-2022

AMMONIUM BICARBONATE (E503)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1512, X1506, X1511, X1534

PRODUCTION:
11072307



IS	Iceland	Ammóníumbíkarbónat (Ammóníumvetniskarbónat, Ammóníumkarbónat)
CZ	Czech Republic	Hydrogenuhlíčan amonný
SK	Slovak Republic	hydrogénuhlíčan amónny
HU	Hungary	Ammónium-bikarbonát (Ammónium-hidrogén-karbonát)
HR	Croatia (Hrvatska)	Amonijev bikarbonat
GR	Greece	Όξινο ανθρακικό αμμώνιο
SI	Slovenia	Amonijev bikarbonat (Amonijev hidrogenkarbonat)
PL	Poland	Wodorowęglan amonu
RO	Romania	Carbonat acid de amoniu
BG	Bulgaria	Амониев хидроген карбонат
RU	Russian Federation	гидрокарбонат аммония
TR	Turkey	Amonyum bikarbonat

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.