

PRODUCT SPECIFICATION

DATE OF ISSUE
18-01-2021

SODIUM HYDROXIDE PELLETS (E524)

NATUURLIJK NATUURLIJK PRODUCT CODE:
X1630, X1631, X1632

PRODUCTION:
11312412

NATUURLIJK
NATUURLIJK
special food ingredients

1. PRODUCT IDENTIFICATION

1.1 Supplier product information

Product name	Sodium hydroxide pellets		
Production	11312412		
Product code	Content	EAN	Packaging
X1630	100g	8718309831547	Plastic jar and screw lock cap with warranty seal. Jar =  Cap = 
X1631	250g	8718309831554	
X1632	1kg	8718309831561	

1.2 Scientific product information

Single ingredient

Main use	Sodium hydroxide is strongly alkaline and is used to decrease the acidity (raise the pH) of food formulations.
Chemical name	Sodium hydroxide solid, Caustic soda
Chemical formula	NaOH
Production method	Electrolysis of salt.

1.3 Legislative product information

CAS number	1310-73-2		
EU food additive	E524		
Country of Origin	Czech Republic		
Organic products	For the purposes of Article 19(2)(b) of Regulation (EC) No 834/2007, sodium hydroxide may be used for surface treatment of bread and pastry products and regulation of acidity in organic flavourings in the manufacture of processed organic foods.		

2. PRODUCT INFORMATION

2.1 Physical and Chemical properties

	Unit	Specification	Method
Appearance		solid, lenticular pellets	
Colour		white	
Odour/taste		odorless	
Purity	%	99,43	titr.
Bulk density	g/cm ³	2,13	
Solubility	g/100ml	42	in water
Boiling point	°C	1388	

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Melting point	°C	323	
Viscosity, dynamic	mPa.s	0,997 – 2,228	20 °C
pH		>14	10g/100ml
Molecular weight		40,0	
Other properties		hygroscopic, corrosive for metalls	

2.2 Microbiological data

Total plate count	Cfu/g	0	
Moulds	Cfu/g	0	
Yeasts	Cfu/g	0	
E Coli	Cfu/g	0	
Salmonella	/25g	negative	
Enterobacteriaceae	Cfu/g	0	
Coliforms	Cfu/g	0	
Staphylococcus aureus	Cfu/g	0	

2.3 Chemical analyses

Sodium carbonate (Na ₂ CO ₃)	%	0,32	titr.
Calcium (Ca)	mg/kg	1,84	AAS
Iron (Fe)	mg/kg	3,0	photometr.
Arsenic (As)	mg/kg	<0,10	AAS-hydrid.
Heavy metals (as Ag)	mg/kg	<5,0	nephelometr.
Chloride (Cl)	mg/kg	5,0	nephelometr.
Sulphate (SO ₄)	mg/kg	<5,0	nephelometr.
Silicate (as SiO ₂)	mg/kg	2,82	photometr.
Phosphate (PO ₄)	mg/kg	5,0	photometr.
Nitrogen (N)	mg/kg	5,0	nephelometr.
Aluminium (Al)	mg/kg	<0,1	ICP
Mercury (Hg)	mg/kg	0,2	Hg-metr.

2.4 Nutritional Information

2.4.1 Nutritional Values

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

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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	-	
Organic acid	g/100g	-	
Dietary fiber	g/100g	-	

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	✗	✗	✗

NATUURLIJK NATUURLIJK
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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	✓
Kosher	✓	Vegetarian	✓

3.3 GMO Declaration:

Sodium hydroxide 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:

Sodium hydroxide is not treated with ionizing radiation .

3.5 BSE/TSE declaration:

Sodium hydroxide is 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:

For the manufacturing of the product, no solvents are used.

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4. STORAGE CONDITIONS

Storage conditions	In closed original packaging. Must be kept cool and dry in a well-ventilated place.
Shelf life	24 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)	Corrosive to Metals - Category 1 – Warning Skin corrosion – Category 1A – Danger Serious eye damage – Category 1 - Danger
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5.3 Labeling, directions for use:

5.3.2 Hazards identification:

Hazard pictogram	
Signal Word	Danger
Hazard Statements	H290 May be corrosive to metals H314 Causes severe skin burns and eye damage

5.3.3 Safety Recommendation:

Prevention	P260 Do not breathe fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower. P305+ P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician.
Chemical dangers	Dissolution in water gives a highly exothermic reaction.
Storage	In closed original packaging. Must be kept cool and dry in a well-ventilated place.

6. EXTENDED PRODUCT INFORMATION

6.1 Usage

Because it is a strong base, sodium hydroxide is very cost-effective and is used at very low levels. It is used to neutralise acid and stop the reaction in the production of invert sugar. It is

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also used in the alkalisation of cocoa powder and in the hydrolysis of proteins. It is used in potato processing to improve the efficiency of peeling.

Sodium hydroxide is available as both a solid (pellets or flakes) and a concentrated liquid, both of which are very caustic, and precautions need to be taken to avoid these materials coming into contact with the skin. Once diluted in the food it is harmless. Because it is a strong base, great care needs to be taken in its use to avoid severe local increases in pH, which could have irreversible effects. Sodium hydroxide should be kept in sealed containers because it absorbs water and carbon dioxide from the atmosphere.

Food uses of sodium hydroxide include washing or chemical peeling of fruits and vegetables, chocolate and cocoa processing, caramel coloring production, poultry scalding, soft drink processing, and thickening ice cream. Olives are often soaked in sodium hydroxide for softening; Pretzels and German lye rolls are glazed with a sodium hydroxide solution before baking to make them crisp and dark brown.

Specific foods processed with sodium hydroxide include:

- German pretzels are poached in a cold sodium hydroxide solution before baking, which contributes to their unique dark brown crust.
- Lye-water is an essential ingredient in the crust of the traditional baked Chinese moon cakes.
- Most yellow coloured Chinese noodles are made with lye-water but are commonly mistaken for containing egg.
- Sodium hydroxide is also the chemical that causes gelling of egg whites in the production of Century eggs.
- Some methods of preparing olives involve subjecting them to a lye-based brine.
- The Filipino dessert (kakanin) called kutsinta uses a small quantity of lye water to help give the rice flour batter a jelly like consistency. A similar process is also used in the kakanin known as pitsi-pitsi or pichi-pichi except that the mixture uses grated cassava instead of rice flour.
- The Norwegian dish known as lutefisk (from lutfisk, "lye fish").
- Bagels are often boiled in a lye solution before baking, contributing to their shiny crust.
- Hominy is dried maize (corn) kernels reconstituted by soaking in lye-water. These expand considerably in size and may be further processed by frying to make corn nuts or by drying and grinding to make grits. Hominy is used to create Masa, a popular flour used in Mexican cuisine to make corn tortillas and tamales.

Dosage for German Pretzels: 3% to max 4% in water.

Wear protective gloves, clothing and eye protection.

6.2 Dictionary

NL	The Netherlands	Natriumhydroxide vast Natronloog, caustische soda, bijtende soda
GB	Great Britain (UK)	Sodium hydroxide solid Caustic soda, Lye, Ascarite, White caustic, Sodium hydrate
DE	Germany	Natriumhydroxid Ätznatron, Ätzsoda, kaustische(s) Soda, Natriumoxydhydrat, Natronhydrat, Natronlauge, Seifenstein, bretzel lauge
FR	France	Hydroxyde de sodium, soude caustique
ES	Spain	Hidróxido de sodio Hidróxido sódico, Soda cáustica, Sosa cáustica, Sosa lejía, Jabón de piedra, Hidrato de sodio

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PT	Portugal	Hidróxido de sódio Soda cáustica, hidróxido cáustico
IT	Italy	Idrossido di sodio Idrato di sodio, idrossido sodico, soda caustica
DK	Denmark	Natriumhydroxid
NO	Norway	Natriumhydroksid, Natronlut, lut
SE	Sweden	Natriumhydroxid fast
FI	Finland	Natriumhydroksidi Lipeä, Kaustinen sooda, Natronlipeä, Natriumhydraatti
IS	Iceland	Vítissóði, natriúmhydroxíð, natrínhydroxíð
CZ	Czech Republic	Hydroxid sodný louh sodný, natron, Natrii hydroxidum, Sodium hydroxide, Natriumhydroxid
SK	Slovak Republic	Hydroxid sodný, lúh sodný, kaustická sóda
HU	Hungary	Nátrium-hidroxid, Marószóda, nátronlúg, lúgkő, marónátron
HR	Croatia (Hrvatska)	Natrijev hidroksid, kaustična soda, kamena soda, lužni kamen
GR	Greece	Στερεό υδροξείδιο του νατρίου
SI	Slovenia	Trdna snov natrijevega hidroksida
PL	Poland	Wodorotlenek sodu, bezbarwne kryształy, pastylki lub płatki
RO	Romania	Hidroxid de sodiu, leșie, sodă caustică
BG	Bulgaria	Натриев хидроксид, Натриева основа, Сода каустик, Суде (диалектно)
RU	Russian Federation	Гидроксид натрия, едкий натр, каустик, каустическая сода, едкая щёлочь
TR	Turkey	Sodyum hidroksit, Kostik

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.