



BIOGON[®] food grade gases.

BIOGON[®] N (E 941). Gaseous nitrogen, N₂



Application

Gaseous nitrogen is used in food packaging. Nitrogen can be used in ready-mixed, customised packaging gases or as pure nitrogen, depending on the product and purpose. The fact that nitrogen is inert means that chemical compounds with the products do not arise. Nitrogen is primarily used to eliminate the oxygen in the atmosphere. This prevents oxidation and microbiological changes in the products. Nitrogen also contributes to the creation of a buffer around the product so that the bag does not collapse during distribution and sale. During the storing and bottling of products such as juice, jam and oils, nitrogen is used as an inert gas in order to extend the shelf-life of the products, avoid oxidation of the flavourings and stabilise the colouring. The gas cylinders containing food grade gases are green and easy to recognise. The colour code on the neck of the cylinder differentiates the various gases. Our food grade gases comply with all EU requirements and are traceable.

Product specification

BIOGON[®] N (E 941). Gaseous nitrogen, N₂.

Product name	Purities	Impurities		Odour, taste	Cylinder type	Content	Material number*
	vol %	unit ppm	H ₂ O				
BIOGON [®] N	≥ 99,95	≤ 20	≤ 20	none	20 l	3,9 m ³	
BIOGON [®] N	≥ 99,95	≤ 20	≤ 20	none	50 l	9,7 m ³	
BIOGON [®] N	≥ 99,95	≤ 20	≤ 20	none	12x50 l	116,6 m ³	

*Differs between countries, see local language version.

All BIOGON[®] products comply with the requirements in European food legislation. This includes, among others, the European regulation (EC) no. 852/2004, regulation (EC) no. 178/2002, regulation (EC) no. 1333/2008 and regulation (EC) 231/2012. The gases in the BIOGON[®] product group do not contain any allergens. No genetically modified organisms (GMO) are used in the manufacturing process for BIOGON[®] gases.

Characteristics and origin

Nitrogen gas is colourless, tasteless and odourless. Nitrogen is not flammable, nor can it support combustion. Atmospheric air contains 78,09 vol. % nitrogen, and nitrogen gas is lighter than air. Nitrogen has a little water solubility and is dissolved in the water phase in food. Nitrogen is inert and does not react with the products. Liquid nitrogen is extracted from air via distillation in an air separation system.

Physical data	Type of gas and symbol	Nitrogen, N ₂		
	Boiling point	-196 °C		
	Heat of vaporisation, 1 bar	199 kJ/kg		
	Heat capacity (15 °C)	1,04 kJ/kg K		
	Conversion factors	1 Nm ³	= 1,419 l	= 1,148 kg
		1 l	= 0,705 Nm ³	= 0,808 kg
		1 kg	= 0,872 Nm ³	= 1,237 l
	Critical values	Critical temperature	-147,1 °C	
		Critical pressure	33,9 bar	
		Critical density	0,311 kg/l	

1 Nm³ = 1 m³ at 15 °C, 1 atm (technical atmosphere). The litre designation is used for gas in the liquid phase.

Safety Our goal is to maintain a high level of safety and protection, both for employees and the environment. Please read our safety data sheets (available at our web sites) before you use the product.

Delivery form Compressed gas in cylinders/bundles.