



Knowledge grows

BOLIFOR® CNF

Calcium nitrate -feed grade – Ruminants

BOLIFOR® CNF is an inorganic feed material of calcium nitrate feed grade and derives from a chemical synthesis of calcium phosphate rock and nitric acid. It is a highly available source of calcium (Ca) and non-protein nitrogen (NPN), with a low level of undesirable elements well below that stipulated by EU feed registration.

BOLIFOR® CNF appears as white prills with a consistent quality. The product is highly soluble in water.

Sales specification

Product Properties	Declared value	Min	Max
Total Nitrogen (N)	15.5%	15.1%	
Total Calcium (Ca)	19%	18.8%	
Ca(NO ₃) ₂	77.5 %		
NH ₄ NO ₃	6.29%		8.57%
NO ₃	63.6%		
pH	6.5	5.7	7.3
Water insoluble >3µm	0.035%		0.05%
Particle form	Prills		
Granulometry (ISO)			
>2.0mm			17%
1.0-2.0mm		78%	
<1.0mm			5%
Bulk density kg/m ³	1100 +/-60		

Special Advantages

The innovative production route of BOLIFOR® CNF used by Yara guarantees the most energy efficient way of manufacturing calcium nitrate as well as a lower carbon footprint compared to conventional production processes. BOLIFOR® CNF has minimum amount of undesirable substances, consistently.

Methane is a greenhouse gas with a strong global warming potential. Besides, it is a product of feed fermentation in the rumen of ruminants. BOLIFOR® CNF acts as a hydrogen sink in the rumen, which directly reduces methane production and prevents from the energy loss associated to CH₄ production by the methanogenic microorganisms. BOLIFOR® CNF has been proven to reduce up to 20% CH₄ the methane yield.

Nutritive Value

Protein is a major limiting nutrient for the current animal. BOLIFOR® CNF calcium nitrate is a non-protein nitrogen (NPN) and highly available calcium (Ca) source. Microbes in the rumen can metabolize the NPN compounds to ultimately produce microbial protein which will be ready for absorption through the animal's gastrointestinal tract. Calcium is one of the most abundant minerals in the body.

The consistent composition of BOLIFOR® CNF contributes to maintain the calcium balance in ruminant diets. Besides, calcium nitrate reduces the number of methanogens, which directly mitigates methane emission and mitigation and prevents from the energy loss associated to CH₄ production by these microorganisms.

Identification

Chemical formula: 5Ca(NO₃)₂ × NH₄NO₃ × 10H₂O
CAS No.: 15245-12-2



Quality check references

Calcium (Ca) extraction	Comparable with Regulation (EC) No 2003/2003 method 8.1
Calcium (Ca) determination	Comparable with Directive 71/250/EEC method 3
Nitrogen (N) determination	Comparable with EU 2003/2003 N-Total-EU 2.2
pH	10% solution, in water
Moisture (mechanical free water)	Karl Fischer method

Undesirable substances	Standard specification	BOLIFOR® CNF	Method of analysis
Fluorine (F)	Max. 2 g/kg	< 0.15 g/kg	Dest. and ISE
Arsenic (As)	Max.10 mg/kg	< 2 mg/kg	ICP-MS
Cadmium (Cd)	Max. 10 mg/kg	< 2 mg/kg	ICP-MS
Lead (Pb)	Max. 15 mg/kg	< 10 mg/kg	ICP-MS
Mercury (Hg)	Max. 0.1 mg/kg	< 0.1 mg/kg	CV-AFS
Dioxins (PCDD/F(BEQ))	Max. 0.75 ng/kg	< 0.75 ng/kg	EC reg 589/2014 and 709/2014
Dioxins + dioxin-like PCBs (PCDD/F and dl PCBs(BEQ))	Max. 1.0 ng/kg	< 1.0 ng/kg	EC reg 589/2014 and 709/2014

*Method of Test: Method 3.2 – EC Regulation No: 2003/2003/EC.

Direction for use

The superior chemical solubility, convenient particle size makes BOLIFOR® CNF a top ranked prilled calcium nitrate source. It is recommended for use in ruminant supplements to mitigate methane emission. Based on scientific research, the inclusion rate should not exceed 2,5% of the diet (on dry matter basis). Gradual introduction is advised. Consultation with an animal nutritionist for adjusting the dose prior to utilization is strongly recommended.

BOLIFOR® CNF has also proven to enhance reproductive performance in swine.

Classification, labelling and packaging

The product is classified as hazardous according to EU regulations. Labelling conforms to Regulation (EC) No 767/2009 of the European Parliament and of the Council and to Commission Regulation (EU) 68/2013.

Packaging available in 25, 600 and 1200 kg bags and bulk.

Handling and storage

BOLIFOR® CNF should be stored indoors protected from sun light in a dry and cool place in properly sealed packaging. When handled and stored according to instructions the shelf life is 3 years from date of production.

Transport and transport regulation

Transported on road, rail and by sea. Not classified as dangerous goods.

Yara Animal Nutrition
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Our production network is certified according to Good Manufacturing Practice - GMP+

The information above is intended to serve as guidelines and does Not constitute a guarantee. We reserve the right to make changes. Valid from 2014-05-01.

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