

KYNOFOS 21F

Monocalcium Phosphate, Monohydrate, Feed Grade

IDENTIFICATION

Chemical formula

$\text{Ca}(\text{H}_2\text{PO}_4)_2 \times \text{H}_2\text{O}$

CAS No. 7758-23-8

EINECS No. 231-837-1

Inorganic feed material according to Council Directive 96/25/EC and Commission Directive 98/67/EC, part B, 11. Minerals, 11.10.

DESCRIPTION

A feed grade monocalcium phosphate produced by means of reacting pure phosphoric acid and calcium sources in a granulator at precise conditions. The phosphoric acid originates from Kemira GrowHow's own apatite mine in Siilinjärvi, Finland.

The selected raw materials, of only mineral origin, and production process ensure a product with good phosphorus digestibility and a level of undesirable elements well below that stipulated by EU feed legislation.

KYNOFOS 21 F appears as grey granules. The product is highly soluble in water and diluted acids. KYNOFOS 21F is odourless and has an acidic taste.

SPECIFICATION

Phosphorus (P)	22.7%
Relative solubility in	
- 2% citric acid	98%
- alkaline ammonium citrate	98%
- water	75%
Calcium (Ca)	16%
Ca:P ratio	0.7:1
Magnesium (Mg)	1%
pH	4-5
Ash insoluble in 3N HCl	< 1%
Moisture (mechanical free water)	< 2%

RECOMMENDED USE/APPLICATIONS

The superior chemical solubility and biological availability make KYNOFOS 21 F a top ranked granular calcium and phosphorus source. It is recommended for use in concentrates, compound feed, mineral feed and other feeds for cattle, pigs, poultry and all other animals.

SPECIAL ADVANTAGES

- Granulated and free flowing which makes the product less dusty and easy to handle
- Very high concentration of phosphorus which gives a narrower Ca:P ratio than DCP
- Very high chemical solubility which gives the product an excellent digestibility
- Low buffering capacity
- Digestibility ranked second to MSP in all biological trials
- In Vivo digestibility coefficients precisely determined at reputable research institutes
- Minimum level of undesirable substances
- Consistent quality

NUTRITIVE VALUE

Trial data show significant differences in phosphorus digestibility between and within the different generic types of inorganic feed phosphates. KYNOFOS 21 F feed phosphates are regularly evaluated in terms of digestibility in monogastric species at reputable research institutes. The results show consistently that KYNOFOS 21 F digestibility values are at the top of the range. Trial reports and digestibility coefficients are available from Kemira GrowHow on request.

PHYSICAL PROPERTIES

Appearance	Fine granules >90% within 0.2-1.5 mm, guaranteed when delivered from factory
Bulk density kg/m ³	900-1100
Water activity aw	< 0.70

UNDESIRABLE SUBSTANCES*	EU STANDARDS	KYNOFOS 21 F VALUES
Fluorine (F)	max 0.2%	< 0.2%
Arsenic (As)	max 10 mg/kg	< 5 mg/kg
Cadmium (Cd)	max 10 mg/kg	< 0.6 mg/kg
Lead (Pb)	max 15 mg/kg	< 2.5 mg/kg
Mercury (Hg)	max 0.1 mg/kg	< 0.05 mg/kg
Dioxins (WHO-PCDD/F-TEQ)	max 1.0 ng/kg	< 0.2 ng/kg
Dioxins + dioxin-likePCBs (WHO-PCDD/F-PCB-TEQ)	max 1.5 ng/kg	< 0.3 ng/kg

* Conforms to current EU legislation, Directive 2002/32/EC of the European Parliament and of the Council and Commission Directives 2003/57/EC, 2003/100/EC and 2006/13/EC.

QUALITY CHECK REFERENCES

Phosphorus:	
Extraction:	
total	Comparable with Regulation (EC) No 2003/2003 method 3.1.1.
in 2% citric acid	Regulation (EC) No 2003/2003 method 3.1.3.
in alkaline ammonium citrate	Regulation (EC) No 2003/2003 method 3.1.5.1
in water	Regulation (EC) No 2003/2003 method 3.1.6.
Determination Comparable with	Regulation (EC) No 2003/2003 method 3.2.
Calcium:	
Extraction:	
total	Comparable with Regulation (EC) No 2003/2003 method 3.1.1.
Determination	Comparable with Directive 71/250/EEC method 3.
pH	1% solution, in water
Ash insoluble in 3N HCl	Directive 71/250/CEE method 6.
Moisture (mechanical free water)	Acetone wash, ambient temperature

CLASSIFICATION, PACKAGING AND LABELLING

The product is not classified as hazardous according to EU regulations.

Bulk, 1000 kg net big bags (PP with a PE inner lining or PP laminate with PP) or shrink wrapped pallet loads of up to 50 kg net bags (paper or paper with a PE inner lining).

Labelling conforms to Directives 96/25/EC and 98/67/EC.

HANDLING AND STORAGE

KYNOFOS 21 F should be stored indoors in a dry and cool place in properly sealed packaging.

When handled and stored according to instructions the shelf life is three years.

TRANSPORT AND TRANSPORT REGULATION

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



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