



Yara Phosphates Oy  
Animal Nutrition  
P O Box 900  
SE - 251 09 Helsingborg  
Sweden

T +46 42 17 10 50  
F +46 42 17 16 20  
[bolifor@yara.com](mailto:bolifor@yara.com)  
[www.yara.com](http://www.yara.com)

# BOLIFOR<sup>®</sup> MCP-F

## 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. 10031-30-8  
EINECS No. 231-837-1

Inorganic feed material according to Regulation (EC) No 767/2009 of the European Parliament and of the Council and Commission Regulation (EU) No 242/2010.

### DESCRIPTION

A feed grade monocalcium phosphate produced by means of reacting phosphoric acid and calcium sources in a granulator at precise conditions.

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

BOLIFOR<sup>®</sup> MCP-F appears as grey granules. The product is highly soluble in water and diluted acids. BOLIFOR<sup>®</sup> MCP-F is odourless and has an acidic taste.

### NUTRITIVE VALUE

Trial data show significant differences in phosphorus digestibility between and within the different generic types of inorganic feed phosphates. BOLIFOR<sup>®</sup> feed phosphates are regularly evaluated in terms of digestibility in monogastric species at reputable research institutes. The results show consistently that BOLIFOR<sup>®</sup> digestibility values are at the top of the range. Trial reports and digestibility coefficients are available on request.

### SPECIFICATION

Phosphorus (P)	22.7%
Relative solubility in	
2% citric acid	98%
alkaline ammonium citrate	98%
water	75%
Calcium (Ca)	16.5%
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 BOLIFOR<sup>®</sup> MCP-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

## PHYSICAL PROPERTIES

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

## UNDESIRABLE SUBSTANCES\*

## EU STANDARDS

Fluorine (F)	max 0.2%
Arsenic (As)	max 10 mg/kg
Cadmium (Cd)	max 10 mg/kg
Lead (Pb)	max 15 mg/kg
Mercury (Hg)	max 0.1 mg/kg
Dioxins (WHO-PCDD/F-TEQ)	max 0.75 ng/kg
Dioxins + dioxin-like PCBs (WHO-PCDD/F-PCB-TEQ)	max 1.0 ng/kg

\* Conforms to current EU legislation.

## 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/EEC method 6.

Moisture (mechanical free water)

Acetone wash, ambient temperature

## CLASSIFICATION, LABELLING AND PACKAGING

Irritating – avoid eye contact.

Labelling conforms to Regulation (EC) No 767/2009 of the European Parliament and of the Council and to Commission Regulation (EU) No 242/2010.

Packaging available in 25 kg, 50 kg, 1000 kg, 1150 kg and bulk.

## HANDLING AND STORAGE

BOLIFOR<sup>®</sup> MCP-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.



Yara, Animal Nutrition  
is part of the Cefic Sector Group  
**Inorganic Feed Phosphates**