



SAFETY DATA SHEET

BOLIFOR MCP-F

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : BOLIFOR MCP-F
EC number : 231-837-1
REACH Registration number : Not available.
CAS number : 10031-30-8
Product code : PKEV4G
Product type : solid (Granular solid.)
Other means of identification : calcium bis(dihydrogenorthophosphate), monohydrate
Chemical formula : $\text{Ca}(\text{H}_2\text{PO}_4)_2 \times \text{H}_2\text{O}$

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Professional USE as such or in a mixture, in the feed industry.

Uses advised against	: Other non-specified industry
Reason	: Due to lack of related experience or data, the supplier cannot approve this use.

1.3 Details of the supplier of the safety data sheet

Yara Phosphates Oy
C/O Yara Helsingborg AB

Address

Street : Industrigatan
Number : 70
Postal code : 251 09
City : HELSINGBORG
Country : Sweden

P.O. Box Address

P.O. Box : 900
Postal code : 251 09
City : HELSINGBORG
Country : Sweden

Telephone number : +46 42 17 10 50
Fax no. : +46 42 17 16 20
e-mail address of person responsible for this SDS : bolifor@yara.com

1.4 Emergency telephone number**National advisory body/Poison Center**

Name : Nationaal Vergiftigings Informatie Centrum (alleen voor behandelend arts)
 Telephone number : +31 (0) 30 274 88 88
 Hours of operation : 24h

Supplier

Telephone number : +46 42 171050
 Hours of operation : 08.00-16.30 (weekdays)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Product definition : Mono-constituent substance

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification : Eye Dam./Irrit.1, H318

Classification according to Directive 67/548/EEC [DSD]

Classification : Xi, R41

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Causes serious eye damage.

Precautionary statements

Prevention : Wear protective gloves and eye protection.

Response :
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Supplemental label elements : Not applicable.

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.
Tactile warning of danger : Not applicable.

2.3 Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.
Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : Not applicable.
Other hazards which do not result in classification : None.

SECTION 3: Composition/information on ingredients

Substance/mixture : Mono-constituent substance

Product / ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
calcium bis(dihydrogenorthophosphate), monohydrate	RRN: Not available. EC: 231-837-1 CAS : 10031-30-8	>=80 - <90	Xi; R41	Eye Dam./Irrit. 1	[A]

Type

[A] Constituent

[B] Impurity

[C] Stabilizing additive

See Section 16 for the full text of the R phrases or H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately. Chemical burns must be treated promptly by a physician.

Inhalation : It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If inhaled, remove to fresh air. Get medical attention if adverse health effects persist or are severe.

Skin contact : Flush contaminated skin with plenty of water. Remove

- contaminated clothing and shoes. Wash with soap and water. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None identified.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
phosphorus oxides
metal oxide/oxides
Avoid breathing dusts, vapors or fumes from burning materials.
In case of inhalation of decomposition products in a fire, symptoms may be delayed.

5.3 Advice for firefighters

Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Additional information : None.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

- 6.4 Reference to other sections** :
- See Section 1 for emergency contact information.
 - See Section 8 for information on appropriate personal protective equipment.
 - See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** :
- Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** :
- Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

- Recommendations** :
- Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

- Recommendations** :
- Not available.
- Industrial sector specific solutions** :
- Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures **Hygiene measures**

: A washing facility or water for eye and skin cleaning purposes should be present.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Tightly-fitting goggles
CEN: EN166

Skin protection **Hand protection**

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
> 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: In case of inadequate ventilation wear respiratory protection. Recommended: Filter P2 (EN 143)

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	solid (Granular solid.)
Color	:	Grayish-white.
Odor	:	Faint odor.
Odor threshold	:	Not determined.
pH	:	4 - 5 [Conc. (% w/w): 0,1 g/l]
Melting point/freezing point	:	Not determined
Initial boiling point and boiling range	:	Not determined
Flash point	:	Not determined
Evaporation rate	:	Not determined
Flammability (solid, gas)	:	Non-flammable.
Burning time	:	Not determined
Burning rate	:	Not determined
Upper/lower flammability or explosive limits	:	Lower: Not determined Upper: Not determined
Vapor pressure	:	Not determined
Vapor density	:	Not determined
Relative density	:	Not determined
Bulk density	:	Not determined
Density	:	0,9 - 1,1 g/cm ³
Solubility(ies)	:	Partially soluble in the following materials: cold water
Water solubility	:	5 g/l
Partition coefficient: n-octanol/water	:	Not determined
Auto-ignition temperature	:	Not determined
Viscosity	:	Dynamic: Not determined Kinematic: Not determined
Explosive properties	:	None.
Oxidizing properties	:	None.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	The product is stable.
10.3 Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	:	No specific data.
10.5 Incompatible materials	:	No specific data.
10.6 Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product / ingredient name	Result	Species	Dose	Exposure	References
calcium bis(dihydrogenorthophosphate), monohydrate					
	LD50 Oral	Rat	17.500 mg/kg	-	GTPZAB 31(12),53,1987
	LD50 Oral	Rat	3.986 mg/kg	-	IUCLID 5
	LD50 Dermal	Rabbit	> 2.000 mg/kg	-	IUCLID 5

Conclusion/Summary : No known significant effects or critical hazards.

Irritation/Corrosion

Product / ingredient name	Result	Species	Score	Exposure	Observation	References
calcium bis(dihydrogenorthophosphate), monohydrate	Eyes - Severe irritant OECD 405	Rabbit			-	IUCLID 5

Conclusion/Summary

Skin : No known significant effects or critical hazards.
Eyes : Causes serious eye damage.
Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards.
Respiratory : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Information on the likely : No known significant effects or critical hazards.

routes of exposure**Potential acute health effects**

- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Ingestion** : May cause burns to mouth, throat and stomach.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin contact** : No specific data.
- Eye contact** : Adverse symptoms may include the following: pain
watering redness

Delayed and immediate effects and also chronic effects from short and long term exposure**Short term exposure**

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

- Conclusion/Summary** : No known significant effects or critical hazards.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

SECTION 12: Ecological information**12.1 Toxicity**

- Conclusion/Summary** : No known significant effects or critical hazards.

12.2 Persistence and degradability

- Conclusion/Summary** : No known significant effects or critical hazards.

12.3 Bioaccumulative potential

Conclusion/Summary : No known significant effects or critical hazards.

12.4 Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods**Product**

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way.
Care should be taken when handling emptied containers that have not been cleaned or rinsed out.
Empty containers or liners may retain some product residues.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information**Regulation: ADR/RID**

14.1 UN number	Not regulated.
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	

14.4 Packing group	
14.5 Environmental hazards	No.
14.6 Additional information	: ADR/RID

Regulation: ADN	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	
14.4 Packing group	
14.5 Environmental hazards	No.
14.6 Additional information	: ADN
Marine pollutant	: No.

Regulation: IMDG	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	
14.4 Packing group	
14.5 Environmental hazards	No.
14.6 Additional information	: IMDG
Marine pollutant	: No.
Special precautions for user	: Not applicable.

Regulation: IATA	
14.1 UN number	Not regulated.
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	
14.4 Packing group	
14.5 Environmental hazards	No.
14.6 Additional information	: IATA
Marine pollutant	: No.
Special precautions for user	: Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

14.8 IMSBC : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorization
Substances of very high concern

Not applicable.

Other EU regulations

Europe inventory : All components are listed or exempted.
Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

Seveso II Directive

This product is not controlled under the Seveso II Directive.

National regulations

Water Discharge Policy (ABM) : Slightly harmful to aquatic organisms., Abatement effort., B

Notes : To our knowledge no other country or state specific regulations are applicable.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- DMEL = Derived Minimal Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- PBT = Persistent, Bioaccumulative and Toxic
- vPvB = Very Persistent and Very Bioaccumulative
- bw = Body weight

Key literature references and sources for data :

- EU REACH IUCLID5 CSR.
- National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
- IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.Regulation (EC) No 1272/2008 Annex VI.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Eye Dam./Irrit. 1 H318	Calculation method

Full text of abbreviated H statements : H318 Causes serious eye damage.

Full text of classifications [CLP/GHS] : **Eye Dam./Irrit. 1, H318:** SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

Full text of abbreviated R phrases : R41- Risk of serious damage to eyes.

Full text of classifications [DSD/DPD] : Xi - Irritant

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Version : 1.2
Prepared by : Yara Product Classifications & Regulations.
|| Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.



**Annex to the extended Safety Data Sheet (eSDS) -
Exposure Scenario:**

Identification of the substance or mixture

Product definition : Mono-constituent substance

Product name : BOLIFOR MCP-F