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# SAFETY DATA SHEET

## Product identifier

Product name : MAP Mono Ammonium Phosphate  
EC number : 231-764-5  
REACH Registration number : 01-2119488166-29  
CAS number : 7722-76-1  
Product code : PC271K  
Product type : Solid  
Chemical formula : NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>

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

Identified uses
Industrial distribution. Industrial USE to formulate chemical product mixtures. Professional formulation of fertiliser products. Professional USE as fertiliser at Farm - loading and spreading. Professional USE as fertiliser in Greenhouse. Professional USE as liquid fertiliser in open field. Professional USE as fertiliser - maintenance of equipment.

Uses advised against : None identified.

## Details of the supplier of the safety data sheet

Address : HD Chemicals LTD  
Street : 9 Scott Business Park  
Beacon Park Road  
Postal code : PL2 2PB  
City : Plymouth  
Country : United Kingdom

**Classification of the substance or mixture.**

**Product definition** : Mono-constituent substance

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

**Classification** : Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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

**Label elements**

**Signal word** : No signal word.

**Hazard statements** : Not applicable.

**Precautionary statements** : 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** : Applicable, Table 65.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

**Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** :

PBT	P	B	T	vPvB	vP	vB
Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

**Other hazards which do not result in classification** : None known.

**Additional information** : None.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances : Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
ammonium dihydrogenorthophosphate	REACH #: 01-2119488166-29 EC : 231-764-5 CAS : 7722-76-1	100	Not classified.	-	[1]

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

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

#### Type

[1] Constituent

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

## SECTION 4: First aid measures

### Description of first aid measures

- Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. Get medical attention if you feel unwell. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- 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. Get medical attention if adverse health effects persist or are severe.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

### Most important symptoms and effects, both acute and delayed

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### Extinguishing media

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

### Special hazards arising from the substance or mixture

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

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

### Advice for firefighters

- Special protective actions 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.

## 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 (see Section 8).
- For emergency responders** : If specialized 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. 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.

**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).

### **Precautions for safe handling**

Not for human or animal consumption.

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**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.

### **Conditions for safe storage, including any incompatibilities**

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. 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.

### **Specific end use(s)**

**Recommendations** : Not available.

## **SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### Control parameters

#### Occupational exposure limits

- Remark** : 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 monitoring standards, such as the following:  
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy)  
European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)  
European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)  
Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
ammonium dihydrogenorthophosphate	DNEL	Long term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	5.9 mg/m <sup>3</sup>	Workers	Systemic

#### PNECs


Product/ingredient name	Type	Compartment Detail	Value	Method Detail
ammonium dihydrogenorthophosphate	PNEC	Sewage Treatment Plant	10 mg/l	Assessment Factors

### Exposure controls

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Individual protection measures

- Hygiene measures** : A washing facility or water for eye and skin cleaning purposes should be present. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

- 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.
- 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. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.
- 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.
- 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.
- Personal protective equipment (Pictograms)** : 

## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Information on basic physical and chemical properties

#### **Appearance**

- Physical state** : Solid
- Color** : White.,
- Odor** : Odorless.
- Melting point/freezing point** : 197 °C
- Initial boiling point and boiling range** : Not applicable.
- Flammability** : Non-flammable.

<b>Lower and upper explosion limit</b>	: <b>Lower:</b> Not applicable. <b>Upper:</b> Not applicable.
<b>Flash point</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: Not applicable.
<b>pH</b>	: 3.6 - 4 [Conc. (% w/w): 10 g/l ]
<b>Viscosity</b>	: <b>Kinematic:</b> Not applicable.
<b>Water solubility</b>	: > 100 g/l
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Vapor pressure</b>	: 0.0000147 hPa @ 20 °C
<b>Relative density</b>	: 1.81 @ 20 °C
<b>Relative vapour density</b>	: Not applicable.
<b>Explosive properties</b>	: Non-explosive.
<b>Oxidizing properties</b>	: None No oxidizing ingredients present.

#### **Particle characteristics**

**Median particle size** : Not determined.

#### **Other information**

No additional information.

## **SECTION 10: Stability and reactivity**

<b><u>10.1 Reactivity</u></b>	: No specific test data related to reactivity available for this product or its ingredients.
<b><u>10.2 Chemical stability</u></b>	: The product is stable.
<b><u>10.3 Possibility of hazardous reactions</u></b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b><u>10.4 Conditions to avoid</u></b>	: Avoid contamination by any source including metals, dust and organic materials.
<b><u>10.5 Incompatible materials</u></b>	: No specific data.
<b><u>10.6 Hazardous decomposition products</u></b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## **SECTION 11: Toxicological information**

### **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

#### **Acute toxicity**

Product/ingredient	Method	Species	Result	Exposure
Date of issue : 03.02.2023				Page:8/15



name				
ammonium dihydrogenorthophosphate				
	OECD 425 LD50 Oral	Rat	2,000 mg/kg	Not applicable.
	OECD 403 LC50 Inhalation Dusts and mists	Rat	> 5 mg/l	4 h
	OECD 402 LD50 Dermal	Rat	> 5,000 mg/kg	Not applicable.

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

#### **Acute toxicity estimates**

N/A

#### **Irritation/Corrosion**

**Conclusion/Summary**

**Skin** : No known significant effects or critical hazards.  
**Eyes** : No known significant effects or critical hazards.  
**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**

Product/ingredient name	Method	Species	Result	Exposure
ammonium dihydrogenorthophosphate				
	Oral	Rat	Fertility effects- Negative Developmental- Negative NOAEL 1500 mg/kg bw/day	-

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

**Information on the likely routes of exposure** : Not available.

#### **Potential acute health effects**

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Eye contact** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Inhalation** : No specific data.

**Ingestion** : No specific data.

**Skin contact** : No specific data.

**Eye contact** : No specific data.

**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**

Product/ingredient name	Method	Species	Result	Exposure
ammonium dihydrogenorthophosphate				
	OECD 422 Sub-acute NOAEL Oral	Rat	250 mg/kg	42 days

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**Effects on or via lactation** : No known significant effects or critical hazards.

**Other effects** : No known significant effects or critical hazards.

**11.2. Information on other hazards**

**11.2.1 Endocrine disrupting properties** : Not available.

**11.2.2 Other information** : Not available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Method	Species	Result	Exposure
ammonium dihydrogenorthophosphate				

	OECD 203 Acute LC50 Fresh water	Fish	85.9 mg/l	96 h
	Acute EC50 Fresh water	Daphnia	1,790 mg/l	48 h
	OECD 201 Acute LC50 Fresh water	Algae	> 100 mg/l	72 h
	OECD 201 Chronic NOEC Fresh water	Algae	100 mg/l	72 h

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

#### **Persistence and degradability**

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

#### **Bioaccumulative potential**

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

#### **12.4 Mobility in soil**

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

**Mobility** : This product may move with surface or groundwater flows because its water solubility is: high

#### **12.5 Results of PBT and vPvB assessment**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
ammonium dihydrogenorthophosphate	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

**12.6 Endocrine disrupting properties** : Not available.

**12.7 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. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with

**Hazardous waste** : jurisdiction.  
 : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

**European waste catalogue (EWC)**

Waste code	Waste designation
06 03 14	solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

**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. 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**

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>14.3 Transport hazard class(es)</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>14.4 Packing group</b>	Not applicable.	Not applicable.	Not applicable.	Not applicable.
<b>14.5. Environmental hazards</b>	No.	No.	No.	No.

**Additional information**

ADR/RID :  
 ADN : **Danger code N3**  
 IMDG :  
 IATA :

**Remark** : Remarks re ADN:  
 The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

**14.6 Special precautions for user** : Transport within user's premises: Ensure that persons transporting the product know what to do in the event of

an accident or spillage.

**14.7 Maritime transport in bulk according to IMO instruments**

**Proper shipping name** : MONOAMMONIUM PHOSPHATE (M.A.P.)

**Remarks** : **Solid bulk cargoes**  
Harmful to the marine environment with regard to MARPOL Annex V: No  
Material is hazardous only in bulk according to the IMSBC: No  
IMSBC shipping group: C

## 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**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII** : Applicable, Table 65.

**- Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

**Other EU regulations**

**Ozone depleting substances (1005/2009/EU)**

None of the components are listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

None of the components are listed.

**Persistent Organic Pollutants**

None of the components are listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**National regulations**

**Biocidal products regulation** : Not applicable.

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

**15.2 Chemical Safety Assessment** : Complete.

## 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
  - N/A = Not available
  - PNEC = Predicted No Effect Concentration
  - RRN = REACH Registration Number
  - SGG = Segregation Group
  - PBT = Persistent, Bioaccumulative and Toxic
  - vPvB = Very Persistent and Very Bioaccumulative
  - bw = Body weight
- Key data sources** :
- EU REACH ECHA/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.
  - Sphera Solutions Inc., 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]**

Not classified.

### **Full text of abbreviated H statements**

Not applicable.

### **Full text of classifications [CLP/GHS]**

Not applicable.

### **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.

