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SECTION 1: Identification

1.1. Identification

Product form : Substance
Trade name/designation : MAP
Chemical name : Ammonium dihydrogenorthophosphate
CAS-No. : 7722-76-1

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

Use of the substance/mixture : Fertilizer
Fire extinguishing agent
Production : paper
Fabric
tiles and ceramics
Processing aid
Food

1.3. Details of the supplier of the safety data sheet

OCP Group
2-4, Rue Al Abtal, Hay Erraha, 20200, Casablanca
BP Maârif, 5196 - Morocco
T +212 5 22 23.00.25 - F +212 5 22 99 83 95
M.Ameziane@ocpgroup.ma

1.4. Emergency telephone number

Emergency number : +212 522 23 04 24
Only available during office hours.

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labeling

Signal word (GHS-US) : Not applicable
Hazard statements (GHS-US) : Not applicable
Precautionary statements (GHS-US) : Not applicable

2.3. Other hazards

Other hazards : The study does not need to be conducted because the substance is inorganic.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance name : MAP
CAS-No. : 7722-76-1



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Substance name	Product identifier	%	GHS-US classification
Ammonium dihydrogenorthophosphate	(CAS-No.) 7722-76-1	90 - 95	Not classified
Ammonium sulphate	(CAS-No.) 7783-20-2	5 - 10	Not classified

Full text of H-phrases: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: First aider: Pay attention to self-protection!. Concerning personal protective equipment to use, see item 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically.
Inhalation	: Remove person to fresh air and keep comfortable for breathing. In case of doubt or persistent symptoms, consult always a physician.
Skin contact	: Take off contaminated clothing. Gently wash with plenty of soap and water. In case of doubt or persistent symptoms, consult always a physician.
Eye contact	: Rinse immediately carefully and thoroughly with eye-bath or water. In case of doubt or persistent symptoms, consult always a physician.
Ingestion	: Rinse mouth thoroughly with water. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	: The following symptoms may occur: Inhalation of dust may cause irritation of the respiratory system.
Skin contact	: The following symptoms may occur: Contact with dust may cause mechanical irritation or drying of the skin.
Eye contact	: The following symptoms may occur: Dust may cause painful eye irritation and tearing.
Symptoms/injuries after ingestion	: The following symptoms may occur: Ingestion may cause nausea and vomiting, Gastrointestinal complaints.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Suitable extinguishing media	: carbon dioxide (CO ₂), powder, alcohol-resistant foam, hazy water.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards	: Do not allow run-off from fire-fighting to enter drains or water courses. Hazardous decomposition products in case of fire : PO _x , NO _x , NH ₃ .
Reactivity	: Non flammable. Reference to other sections: 10.4 & 10.5.

5.3. Advice for firefighters

Firefighting instructions	: Evacuate area. Use water spray or fog for cooling exposed containers. Contain the extinguishing fluids by bunding. Prevent fire-fighting water from entering environment. Avoid dust formation. Knock down/dilute dust cloud with water spray.
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- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.
- Other information : Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- For non-emergency personnel : Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Wear recommended personal protective equipment. Concerning personal protective equipment to use, see item 8. Do not breathe dust. Ensure equipment is adequately grounded. Use explosion-proof equipment. Use only non-sparking tools.

6.1.2. For emergency responders

- For emergency responders : Concerning disposal elimination after cleaning, see item 13. Concerning personal protective equipment to use, see item 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Stop leak if safe to do so. Dam up the solid spill. Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. Large spills: scoop solid spill into closing containers. This material and its container must be disposed of in a safe way, and as per local legislation. Avoid dust formation. Knock down/dilute dust cloud with water spray.

6.4. Reference to other sections

Concerning personal protective equipment to use, see item 8. Concerning disposal elimination after cleaning, see item 13.


SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see item 8. Do not breathe dust. Avoid contact with skin, eyes and clothing. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment. Avoid dust formation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools.
- Hygiene measures : Keep good industrial hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10.
- Packaging materials : Keep only in the original container.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

MAP (7722-76-1)		
ACGIH	ACGIH TWA (mg/m ³)	No data available
Ammonium sulphate (7783-20-2)		
Not applicable		
Ammonium dihydrogenorthophosphate (7722-76-1)		
Not applicable		

Additional information : Personal air monitoring :
Room air monitoring
Recommended monitoring procedures

8.2. Exposure controls

Engineering measure(s) : Provide adequate ventilation. Organizational measures to prevent /limit releases, dispersion and exposure. Safe handling: see section 7 . Apply measures to prevent dust explosions. Ensure equipment is adequately grounded.

Personal protective equipment : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hand protection : Not required for normal conditions of use. In case of repeated or prolonged contact wear gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Eye protection : Dust protection eye glasses.

Body protection : Wear suitable protective clothing. Impervious clothing.

Respiratory protection : Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment. Effective dust mask. Filter type: P.

Thermal hazard protection : Not required for normal conditions of use. Use dedicated equipment.

Environmental exposure controls : Avoid release to the environment. Comply with applicable environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Granulate.

Color : evenly colored

Odor : odorless


Odor threshold : No data available

pH : 4,5 - 5,5 (10%)

Melting / freezing point : 190 °C Decomposes before melting

Freezing point : No data available

Initial boiling point and boiling range : Not applicable

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Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: Not applicable
Explosive properties	: Not applicable. The classification procedures for self-reactive substances and mixtures need not be applied because there are no chemical groups present in the molecule associated with explosive or selfreactive properties.
Oxidizing properties	: Not applicable.
Vapor pressure	: ~ 0,06 hPa (125°C)
Relative density	: No data available
Vapor density	: Not applicable
Specific gravity / density	: Bulk density
Molecular weight	: (NH ₄)H ₂ PO ₄ 115,03 g/mol
Solubility	: Water: No data available
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 125 °C
Viscosity	: Not applicable
Kinematic viscosity	: No data available
Dynamic viscosity	: No data available

9.2. Other information

Additional information : inorganic

SECTION 10: Stability and reactivity

10.1. Reactivity

Non flammable. Reference to other sections: 10.4 & 10.5.

10.2. Chemical stability

Hygroscopic. Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Exposure to moisture. Avoid dust formation. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Safe handling: see section 7.

10.5. Incompatible materials

Incompatible with strong acids and oxidizing agents. Copper alloys. Alkali. Sodium hypochlorite. Safe handling: see section 7.

10.6. Hazardous decomposition products

PO_x, NO_x, NH₃. Reference to other sections: 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects



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Acute toxicity : Not classified
(Based on available data, the classification criteria are not met)

Ammonium sulphate (7783-20-2)	
LD50 oral rat	4250 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE US (oral)	4250 mg/kg body weight

Ammonium dihydrogenorthophosphate (7722-76-1)	
LD50 oral rat	5750 mg/kg
LD50 dermal rat	> 7940 mg/kg
LD50 dermal rabbit	> 7940 mg/kg

Skin corrosion/irritation : Not classified
(Based on available data, the classification criteria are not met)
pH: 4,5 - 5,5 (10%)

Serious eye damage/irritation : Not classified
(Based on available data, the classification criteria are not met)
pH: 4,5 - 5,5 (10%)

Respiratory or skin sensitization : Not classified
(Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified
(Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified
(Based on available data, the classification criteria are not met)

Specific target organ toxicity – single exposure : Not classified
(Based on available data, the classification criteria are not met)

Specific target organ toxicity – repeated exposure : Not classified
(Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified
(Based on available data, the classification criteria are not met)


Inhalation : The following symptoms may occur: Inhalation of dust may cause irritation of the respiratory system.

Skin contact : The following symptoms may occur: Contact with dust may cause mechanical irritation or drying of the skin.

Eye contact : The following symptoms may occur: Dust may cause painful eye irritation and tearing.

Symptoms/injuries after ingestion : The following symptoms may occur: Ingestion may cause nausea and vomiting, Gastrointestinal complaints.

Other information : Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : not hazardous. According to the criteria of the EC-classification and labeling "dangerous for the environment" (93/21/EEC) the material/product is not to be classified as dangerous to the environment.

Ammonium sulphate (7783-20-2)	
LC50 fish 1	53 mg/l (96 h)
EC50 Daphnia 1	169 mg/l (Daphnia magna)
LC50 fish 2	480 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [flow-through])
ErC50 (algae)	2700 mg/l
NOEC chronic fish	5,29 mg/l
NOEC chronic crustacea	3,12 mg/l

12.2. Persistence and degradability

MAP (7722-76-1)	
Persistence and degradability	Not applicable. The study does not need to be conducted because the substance is inorganic.

12.3. Bioaccumulative potential

MAP (7722-76-1)	
Partition coefficient n-octanol/water	No data available
Bioaccumulative potential	There is no bioaccumulation.

Ammonium sulphate (7783-20-2)	
Partition coefficient n-octanol/water	-5,1 (at 25 °C)

Ammonium dihydrogenorthophosphate (7722-76-1)	
BCF fish 1	(no bioaccumulation expected)

12.4. Mobility in soil

MAP (7722-76-1)	
Mobility in soil	No data available
Ecology - soil	Not applicable.

12.5. Other adverse effects


Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Avoid release to the environment. Dispose of empty containers and wastes safely. Safe handling: see section 7. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations.

Additional information : Dispose of contaminated materials in accordance with current regulations.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated for transport

Transportation of Dangerous Goods

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Ammonium sulphate (7783-20-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ammonium dihydrogenorthophosphate (7722-76-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

MAP (7722-76-1)

WHMIS Classification	Not applicable
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Ammonium sulphate (7783-20-2)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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Ammonium dihydrogenorthophosphate (7722-76-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations


Ammonium sulphate (7783-20-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Ammonium dihydrogenorthophosphate (7722-76-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

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Ammonium sulphate (7783-20-2)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Ammonium dihydrogenorthophosphate (7722-76-1)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

No additional information available


SECTION 16: Other information

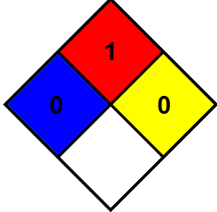
Sources of key data used to compile the datasheet : European Chemicals Bureau, SDS supplier, CSR.

Abbreviations and acronyms : BTT = Breakthrough time (maximum wearing time). DMEL = Derived Minimal Effect level. EC50 = Median Effective Concentration. EL50 = Median effective level. ErC50 = EC50 in terms of reduction of growth rate. ErL50 = EL50 in terms of reduction of growth rate. LC50 = Median lethal concentration. LD50 = Median lethal dose. LL50 = Median lethal level. NA = Not applicable. NOEC = No observed effect concentration. NOELR = No observed effect loading rate. N.O.S. = Not Otherwise Specified. OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs). STOT = Specific Target Organ Toxicity. TWA = time weighted average. VOC = Volatile organic compounds.

Training advice : Training staff on good practice. Manipulations are to be done only by qualified and authorized persons.

Other information : Classification /. Assessment method : Calculation method.

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NFPA health hazard	: 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.	
NFPA fire hazard	: 1 - Materials that must be preheated before ignition can occur.	
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.	
Hazard Rating		
Health	: 1 Slight Hazard - Irritation or minor reversible injury possible	
Flammability	: 0 Minimal Hazard - Materials that will not burn	
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.	

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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