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

1.1. Product identifier

Product form : Substance
Trade name/designation : Monoammonium Phosphate (MAP)
Chemical name : Ammonium dihydrogenorthophosphate
EC-No. : 231-764-5
CAS-No. : 7722-76-1
REACH registration No : 01-2119488166-29-0023
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Fertilizer

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Supplier

Balakovo branch of JSC Apatit
413810, Saratov Region. Balakovski district, village Bikov Otrog,
Proezd Chimikov, Building 1
Balakovo, Saratov region - Russia
T +7(8453) 62-48-72,
BfApatit@phosagro.ru

Only Representative

PHOSINT LIMITED
21 Vasili Michailidi
P.O. Box 54708
3026 Limassol - Cyprus
T +357-25-508003 - F +357-25-508004
phosint@virtualoffice8.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, 24/7, healthcare professionals only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

2.2. Label elements

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

Not applicable.

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2.3. Other hazards

Other hazards : Results of PBT and vPvB assessment : The study does not need to be conducted because the substance is inorganic.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance name : Monoammonium Phosphate (MAP)
CAS-No. : 7722-76-1
EC-No. : 231-764-5

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ammonium dihydrogenorthophosphate	(CAS-No.) 7722-76-1 (EC-No.) 231-764-5 (EC Index) -	60 - 78	Not classified
Diammonium Sulphate	(CAS-No.) 7783-20-2 (EC-No.) 231-984-1 (EC Index) -	5 - 11	Not classified
Diammonium hydrogenorthophosphate	(CAS-No.) 7783-28-0 (EC-No.) 231-987-8 (EC Index) -	1 - 5	Not classified

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection!. See also section 8. Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance.

Inhalation : Keep at rest. Provide fresh air. If breathing is difficult, give oxygen. In case of doubt or persistent symptoms, consult always a physician.

Skin contact : Wash off with soap and water. Remove contaminated clothing and wash it before reuse. In case of doubt or persistent symptoms, consult always a physician.

Eyes contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion : Give water to drink. Do not induce vomiting without medical advice. If symptoms persist, call a physician.

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

Inhalation : Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.

Skin contact : No adverse effects are expected.

Eyes contact : Dust may cause painful eye irritation and tearing.

Ingestion : Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting. Abdominal pain. Diarrhoea.

Chronic symptoms : Anticipated delayed effects : Not known.

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

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Carbon dioxide. dry extinguishing powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Not flammable. When heated to decomposition, emits toxic fumes (> 197 °C). Avoid inhalation of gases.

Hazardous decomposition products in case of fire : Nitrogen oxides (NOx). Ammonia. Burning produces noxious and toxic fumes.

5.3. Advice for firefighters

Firefighting instructions : Evacuate personnel to a safe area. Respiratory protection. Impervious protective suit with gloves, boots, and full head and face protection must be worn. In case of hazardous fumes, wear autonomous breathing apparatus. Do not allow run-off from fire-fighting to enter drains or water courses.

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 : Provide adequate ventilation. Evacuate personnel to a safe area. Avoid contact with eyes. Use personal protective equipment as required. Reference to other sections: 8. Take any precaution to avoid mixing with combustibles...

6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Flush with plenty of water. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 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 section 8. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Keep away from heat. Hygroscopic. Protect from moisture. Take any precaution to avoid mixing with combustibles... See also section 10. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time).

Hygiene measures : Keep good industrial hygiene. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Wash hands and face before breaks and immediately after handling of the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Keep away from food, drink and animal feedingstuffs. Protect from moisture.

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Incompatible materials : Strong acids. Phosphoric acid. alkalis (NH₃).

Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Packaging materials : Keep only in the original container. Suitable material: plastics (PP, PE).

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Diammonium hydrogenorthophosphate (7783-28-0)		
Latvia	OEL TWA (mg/m ³)	6 mg/m ³ (Ammophos)
Diammonium Sulphate (7783-20-2)		
Bulgaria	OEL TWA (mg/m ³)	10 mg/m ³
Latvia	OEL TWA (mg/m ³)	0,02 mg/m ³ (hydrate (Ammonium chromum sulfate))

Additional information : Concentration measurement in air. Personal air monitoring

8.2. Exposure controls

Engineering measure(s) : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Organisational measures to prevent /limit releases, dispersion and exposure. See also section 7.

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 : Wear chemically resistant gloves (tested to EN374) . Nitrile rubber. Butyl rubber. natural rubber gloves. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves.

Eye protection : Safety glasses (EN166). tightly fitting safety goggles

Body protection : Wear suitable coveralls to prevent exposure to the skin. Wear impervious rubber safety shoes

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140). full face mask (DIN EN 136). Filter type: BP/KP (EN 141)

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

Environmental exposure controls : Do not allow to enter into surface water or drains. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Granulate <1 mm 3%, 2 - 5 mm >95%, <6 mm 100%.

Colour : White. Light grey. yellowish. / White.

Odour : odourless.

Odour threshold : Not applicable

pH : 5,5 - 6 (1% Solution)

Relative evaporation rate (butylacetate=1) : Not applicable.

Melting / freezing point : 197 °C (1013 hPa)

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Freezing point	: No data available
Initial boiling point and boiling range	: Not determined
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 197 °C (1013 hPa)
Flammability (solid, gas)	: The product is not flammable.
Vapour pressure	: 0,00147 Pa (20°C)
Vapour density	: Not applicable
Relative density	: 1,81 (20°C)
Solubility	: Water: > 100 g/l (20°C)
Partition coefficient n-octanol/water	: Not applicable
Kinematic viscosity	: Not applicable
Dynamic viscosity	: No data available
Explosive properties	: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	: Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	: Non flammable

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal conditions. Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Protect from moisture. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Safe handling: see section 7.

10.5. Incompatible materials

Strong acids. (=> Phosphoric acid). alkalis (=>NH3). Safe handling: see section 7.

10.6. Hazardous decomposition products

Reference to other sections 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Ammonium dihydrogenorthophosphate (7722-76-1)	
LD50/oral/rat	5750 mg/kg
LD50/dermal/rat	> 7940 mg/kg
LD50/dermal/rabbit	> 7940 mg/kg
Diammonium hydrogenorthophosphate (7783-28-0)	
LD50/oral/rat	> 2000 mg/kg
LD50/dermal/rabbit	> 5000 mg/kg

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Diammonium Sulphate (7783-20-2)	
LD50/oral/rat	2840 mg/kg
LD50/dermal/rat	> 2000 mg/kg

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 5,5 - 6 (1% Solution)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 5,5 - 6 (1% Solution)
Respiratory or skin sensitisation	: 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)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)

Monoammonium Phosphate (MAP) (7722-76-1)	
NOAEL, oral	1500 mg/kg bw/day (28 days)

Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Other information	: Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties	: According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".
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Ammonium dihydrogenorthophosphate (7722-76-1)	
LC50 fish 1	> 85,9 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

Diammonium hydrogenorthophosphate (7783-28-0)	
LC50 fish 1	26,5 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	1790 mg/l
LC50 fish 2	24,8 - 29,4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC, LC50, algae, Freshwater	> 100 mg/l
NOEC, EC, LC10, algae, Freshwater	100 mg/l
EC, LC50, microorganisms	> 100 mg/l
NOEC, EC, LC10, microorganisms	100 mg/l

Diammonium Sulphate (7783-20-2)	
LC50 fish 1	250 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
EC50 Daphnia 1	14 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	480 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [flow-through])

12.2. Persistence and degradability

Monoammonium Phosphate (MAP) (7722-76-1)	
Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Monoammonium Phosphate (MAP) (7722-76-1)	
Partition coefficient n-octanol/water	Not applicable
Bioaccumulative potential	According to experience not expected.

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

Diammonium hydrogenorthophosphate (7783-28-0)	
BCF fish 1	(no bioaccumulation expected)

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

12.4. Mobility in soil

Monoammonium Phosphate (MAP) (7722-76-1)	
Mobility in soil	Not expected to adsorb on soil.

12.5. Results of PBT and vPvB assessment

Monoammonium Phosphate (MAP) (7722-76-1)	
Results of PBT assessment	The study does not need to be conducted because the substance is inorganic.

12.6. Other adverse effects

Other adverse effects : None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Handle with care. Safe handling: see section 7. Collect and dispose of waste product at an authorised disposal facility. Dispose of contaminated materials in accordance with current regulations.

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

Further ecological information : Do not allow to enter into surface water or drains.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
The following Waste Codes are only suggestions:
06 10 99 - wastes not otherwise specified

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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

14.6. Special precautions for user

Special precautions for user : Not applicable

- Overland transport

Not applicable

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- Transport by sea

Not applicable

- Air transport

Not applicable

- Inland waterway transport

Not applicable

- Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Code: IBC : IMSBC Code Class: NA, Group C.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

72. The substances listed in column 1 of the Table in Appendix 12	Ammonium dihydrogenorthophosphate ; Diammonium hydrogenorthophosphate ; Diammonium Sulphate
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Monoammonium Phosphate (MAP) is not on the REACH Candidate List

Monoammonium Phosphate (MAP) is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV; ID No. 2309)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out

SECTION 16: Other information

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Abbreviations and acronyms:

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals NA = Not applicable
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Sources of key data used to compile the datasheet	: Name (SDS) Monoammonium Phosphate. Revision date 02.02.2015. Manufacturer/Supplier Balakovo branch of JSC Apatit 413810, the Russian Federation, Saratov Region, Balakovo District, village Bikov Otrog, Proezd Chimikov, 1. ECHA (European Chemicals Agency).
Training advice	: Manipulations are to be done only by qualified and authorised persons. Training staff on good practice.
Other information	: Assessment/classification CLP. Article 9. Calculation method. Physicochemical hazard assessment: Information given is based on tests on the mixture itself.

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
 Classification according to Regulation (EC) No. 1272/2008 [CLP]
 Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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