

# SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006, Regulation (EU) No 2015/830, Regulation (EC) No 1272/2008

## Monoammonium phosphate

Revision Date 20.02.2016

Version 3.0

EU / EN

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

#### 1.1 Product identifier

Trade name : Monoammonium phosphate  
Chemical name : Not applicable.  
CAS-No : Not applicable.  
EC-No : Not applicable.  
Registration number : Not applicable. The product is a preparation.

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

Use of the Substance/ Mixture : Fertilizer

#### 1.3 Details of the supplier of the safety data sheet

Company : Phosphorit Industrial Group LLC  
Phosphorit Industrial Site, Kingisepp district, Leningrad Region, 188452, Russia

Telephone : +7 (81375) 9-51-91

E-mail address : Info\_KSP@eurochem.ru

Only representative : AB "Lifosa"  
Juodkiskio 50, LT-57502 Kedainiai, Lithuania

Telephone : + (370 347) 66 483

E-mail address : info@lifosa.com

#### 1.4 Emergency telephone number

**Austria:** Poison Control Centre, Tel.: (+43)-1-406-43-43;  
**Belgium:** Belgisch Antigifcentrum, Tel.: 070/245-245;  
**Bulgaria:** Многопрофилна болница за активно лечение и спешна медицина "Н.И.Пирогов",  
Tel.: (+359)-2-9154-409;  
**Croatia:** Poison Control Centre, Tel: (+385)-1-23-48-342;  
**Czech Republic:** Toxikologické informační středisko Telefon: (+420)-224-919-293,  
**Denmark:** Poison Control Hotline, Tel.: (+45)-82-12-12-12;  
**Estonia:** National emergency telephone number: 112 or Poison information telephone number:  
16662, calling from abroad: (+372)-626-93-90;  
**Finland:** Poison Information Centre, Tel.: (09)-471-977 (direct) or (09)-4711;  
**France:** ORFILA (INRS): (+33)-(0)-1-45-42-59-59;  
**Hungary:** Az Egészségügyi Toxikológiai Tájékoztató Szolgálat elérhetőségei Tel: (+36)-80-201-199;  
**Latvia:** Valsts Toksikológijas centra Saindēšanās un zāļu informācijas centrs,  
Tel.: (+371)-67042473;  
**Lithuania:** Sveikatos apsaugos ministerijos ekstremalių sveikatai situacijų centras,  
Tel.: (+370)-5-236-20-52 or (+370)-687-53378;  
**Malta:** Mater Dei Hospital, Tel: 2545-0000;  
**Portugal:** Centro de Informação Antivenenos (Portuguese Poison Centre), Tel: 808-250-143;  
**Romania:** Biroul RSI Si Informare Toxicologica, Tel.: 021-318-36-06 (direct) (8.00 - 15.00);  
**Slovak Republic:** National Toxicological Information Centre (+421)-2-5477-4166;  
(+420)-224-915-402;

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Sweden: 112.

Note: please, consult with your local/national competent authorities for the emergency number in your country.

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification according to REGULATION (EC) No 1272/2008

The product does not need to be classified in accordance with REGULATION (EC) No 1272/2008. Not a hazardous substance or mixture according to REGULATION (EC) No 1272/2008.

#### 2.2 Label elements

##### Labeling according to REGULATION (EC) No 1272/2008

The product does not need to be labelled in accordance with REGULATION (EC) No 1272/2008. Not a hazardous substance or mixture according to REGULATION (EC) No 1272/2008.

#### 2.3 Other hazards

No data available.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

The product is a preparation within the meaning of the REACH Regulation (1907/2006/EC). The following table contains the main constituent at the top.

Chemical Name	Concentration, wt. %	CAS-No	EC-No / Registration number	Index-No	GHS
Ammonium dihydrogenorthophosphate	70 - 80	7722-76-1	231-746-5 / 01-2119488166-29-0002	Not available	Not classified
Diammonium hydrogenorthophosphate	3-10	7783-28-0	231-987-8 / 01-2119490974-22-0002	Not available	Not classified
Magnesium hydrogenorthophosphate	3-8	7757-86-0	231-823-5	Not available	Not classified
Ammonium sulphate	5-10	7783-20-2	231-984-1 / 01-2119455044-46-0015	Not available	Not classified

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider needs to protect himself. Move out of dangerous area. Never give anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.

Inhalation : If breathed in, move person into fresh air. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

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- Skin contact** : In case of contact, immediately flush skin with soap and plenty of water. Consult a physician.
- Eye contact** : Protect unharmed eye. If easy to do, remove contact lens, if worn. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Ingestion** : If a person vomits when lying on his back, place him in the recovery position. Rinse mouth with water. Consult a physician.

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

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

No data available.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing Media

**Suitable extinguishing media** : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

**Specific hazards** : Hazardous decomposition products may be formed under fire conditions (see section 10). Exposure to decomposition products may be a hazard to health.

### 5.3 Advice fire fighters

**Special protective equipment for fire-fighters** : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**Further information** : Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. The product itself does not burn.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedure

Refer to protective measures listed in sections 7 and 8. Use personal protective equipment. Remove all sources of ignition. Avoid contact with skin and eyes. Ensure adequate ventilation, especially in confined areas. Immediately evacuate personnel to safe areas. Avoid dust formation.

### 6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. Avoid release to the environment. Refer to special instructions.

### 6.3 Methods and materials for containment and cleaning up

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Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections

See Section 7, 8, 11, 12 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8. Avoid contact with skin and eyes. Avoid formation of dust. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from combustible material. Do not carry cloths that have come into contact with the product in your clothing. Handle with care. Avoid exposure - obtain special instructions before use.

Advice on protection against fire and explosion : Normal measures for preventive fire protection. Keep away from heat and sources of ignition.

### 7.2 Conditions for safe storage including any incompatibilities

Requirements for storage areas and containers : Store in a place accessible by authorized persons only. Keep locked up or in an area accessible only to qualified or authorized persons. Store in cool place. Store in polyethylene or paper bags (container) or not packaged in special storage areas. Keep container tightly closed in a dry and well-ventilated place.

Further information on storage conditions : Protect from moisture.

Advice on common storage : Keep away from food, drink and animal feeding stuffs. Incompatible with acids and bases. Do not store near combustible materials, organic matter, and other types of fertilizers.

Storage period : Unlimited.

### 7.3 Specific end use(s)

No data available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components	CAS-No	Control parameters	Basis	Country
Ammonium sulphate	7783-20-2	TWA: 10.0 mg/m <sup>3</sup>	НАРЕДБА № 13	Bulgaria
Diammonium hydrogenorthophosphate	7783-28-0	TWA: 6 mg/m <sup>3</sup> (limit value – 8 hours)	MK 01.02.2011. Nr.92	Latvia

### PNEC (Predicted No effect Concentration)

PNEC aqua – freshwater:

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Ammonium dihydrogenorthophosphate	: 1.7 mg/l
Diammonium hydrogenortho-phosphate	: 1.7 mg/l
Ammonium sulphate	: 0.312 mg/l

### PNEC aqua – marine water:

Ammonium dihydrogenorthophosphate	: 0.17 mg/l
Diammonium hydrogenortho-phosphate	: 0.17 mg/l
Ammonium sulphate	: 0.0312 mg/l

### PNEC aqua – intermittent releases:

Ammonium dihydrogenorthophosphate	: 17.0 mg/l
Diammonium hydrogenortho-phosphate	: 17.0 mg/l
Ammonium sulphate	: 0.53 mg/l

### PNEC sediment – freshwater:

Ammonium sulphate	: 0.063 mg/l
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### PNEC soil:

Ammonium sulphate	: 62.6 mg/kg soil dw
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### PNEC STP:

Ammonium dihydrogenorthophosphate	: 10 mg/l
Diammonium hydrogenortho-phosphate	: 10 mg/l
Ammonium sulphate	: 16.18 mg/l

### **DNEL (Derived No Effect Level)/DMEL (Derived Minimal Effect Level)**

#### **Worker**

##### Long-term exposure systemic effects, dermal

Ammonium dihydrogenorthophosphate	: 34.7 mg/kg bw/day
Diammonium hydrogenorthophosphate	: 34.7 mg/kg bw/day
Ammonium sulphate	: 42.667 mg/kg bw/day

##### Long-term exposure systemic effects, inhalation

Ammonium dihydrogenorthophosphate	: 6.1 mg/m <sup>3</sup>
Diammonium hydrogenorthophosphate	: 6.1 mg/m <sup>3</sup>
Ammonium sulphate	: 11.167 mg/m <sup>3</sup>

#### **General population**

##### Long-term exposure systemic effects, dermal

Ammonium dihydrogenorthophosphate	: 20.8 mg/kg bw/day
Diammonium hydrogenorthophosphate	: 20.8 mg/kg bw/day
Ammonium sulphate	: 12.8 mg/kg bw/day

##### Long-term exposure systemic effects, inhalation

Ammonium dihydrogenorthophosphate	: 1.8 mg/m <sup>3</sup>
Diammonium hydrogenorthophosphate	: 1.8 mg/m <sup>3</sup>
Ammonium sulphate	: 1.667 mg/m <sup>3</sup>

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#### Long-term exposure systemic effects, oral

Ammonium dihydrogenorthophosphate	: 2.1 mg/kg bw/day
Diammonium hydrogenorthophosphate	: 2.1 mg/kg bw/day
Ammonium sulphate	: 6.4 mg/kg bw/day

#### **8.2 Exposure controls**

##### Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms. Highly effective exhaust ventilation.

##### Personal protective equipment

Respiratory protection : Half mask with a particle filter P1 (EN 143).

Remarks : Use respirators and components tested and approved under appropriate government standards CEN (EU).

##### Hand protection

Material : Combo gloves.

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Eye protection : Tightly fitting safety goggles.

Remarks : Use equipment for eye protection tested and approved under appropriate government standards such as EN 166 (EU).

Skin and body protection : Impervious clothing.

Remarks : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
General industrial hygiene practice.  
Avoid formation of dust.  
Avoid contact with skin, eyes and clothing.  
When using do not eat, drink or smoke.  
Wash hands before breaks and at the end of workday.  
Follow the skin protection plan.  
Wash contaminated clothing before re-use.

##### Environmental exposure controls

No data available.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Form	:	Granulated.
Colour	:	White, light grey.
Odour	:	Faint.
Odor threshold	:	No data available.
Flash point	:	No data available.
Lower explosion limit	:	No data available.
Upper explosion limit	:	No data available.
Explosive properties	:	Non explosive.
Flammability	:	Non flammable.
Oxidizing properties	:	Non oxidising.
Self-ignition temperature	:	No data available.
Melting point/range	:	190 °C
pH	:	4 – 5 (1 % aqueous solution)
Boiling point/boiling range	:	No data available.
Vapor pressure	:	No data available.
Density	:	Not applicable.
Bulk density	:	Approximately 1000 kg/m <sup>3</sup> , depends on granulometry.
Water solubility	:	264 g/l at 15 °C
Partition coefficient: n-octanol/water	:	Not applicable.
Solubility in other solvents	:	No data available.
Viscosity, dynamic	:	Not applicable. The substance is a solid at room temperature. Viscosity is only relevant to liquids.
Viscosity, kinematic	:	Not applicable. The substance is a solid at room temperature. Viscosity is only relevant to liquids.
Relative vapor density	:	No data available/
Evaporation rate	:	No data available.
Decomposition temperature	:	No data available.

#### 9.2 Other information

No data available.

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

No data available.

#### 10.2 Chemical stability

No decomposition if stored and applied as directed.

#### 10.3 Possibility of hazardous reactions

No data available.

#### 10.4 Conditions to avoid

Protect from moisture.

#### 10.5 Incompatible materials

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Materials to avoid : Acids and bases, combustible materials, organic matter, other types of fertilizers.

#### 10.6 Hazardous decomposition products

Hazardous decomposition products : Build-up of dangerous/toxic fumes possible in cases of fire/high temperature:  
Nitrogen oxides, ammonia, oxides of phosphorus, sulphur oxides.

Thermal decomposition : No data available.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

##### Acute toxicity

##### Acute oral toxicity

Ammonium dihydrogenorthophosphate : LD<sub>50</sub> (rat): > 2,000 mg/kg  
Ammonium sulphate : LD<sub>50</sub> (rat): 4,250 mg/kg  
Diammonium hydrogenorthophosphate : LD<sub>50</sub> (rat): > 2,000 mg/kg

##### Acute inhalation toxicity

Ammonium dihydrogenorthophosphate : LC<sub>50</sub> (rat): > 5,000 mg/m<sup>3</sup>  
Exposure time: 4 h  
Ammonium sulphate : LC<sub>50</sub> (rat): 1,000 mg/m<sup>3</sup>  
Exposure time: 4 h  
Diammonium hydrogenorthophosphate : LC<sub>50</sub> (rat): > 5,000 mg/m<sup>3</sup>  
Exposure time: 4 h

##### Acute dermal toxicity

Ammonium dihydrogenorthophosphate : LD<sub>50</sub> (rabbit): > 5,000 mg/kg  
Ammonium sulphate : LD<sub>50</sub> (rat): > 2,000 mg/kg  
Diammonium hydrogenorthophosphate : LD<sub>50</sub> (rat): > 5,000 mg/kg

##### Acute toxicity (other routes of administration)

No data available

#### Skin corrosion / irritation

Skin irritation : Non-irritating.

#### Serious eye damage / eye irritation

Eye irritation : Non-irritating.

#### Sensitization of the respiratory / skin

Skin sensitization : Non skin sensitizing.

Respiratory sensitization : Non respiratory sensitizing.

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#### Mutagenicity

No mutagenic effect.

#### Carcinogenicity

No carcinogenic effect.

#### Reproductive toxicity

No reproductive effect.

#### Teratogenicity

No data available.

#### Specific target organ toxicity after single exposure

Inhalation of dust may cause irritation of respiratory tract.

#### Specific target organ toxicity after repeated exposure (sub-acute / sub-chronic)

##### Repeated dose toxicity: (sub-acute/ sub-chronic)

Ammonium drogenorthophosphate	di hy-	: NOAEL (sub-acute; rat): 250 mg/kg bw/day Exposure time: 6 weeks
Diammonium drogenorthophosphate	hy-	: NOAEL (sub-acute; rat): 250 mg/kg bw/day Exposure time: 6 weeks
Ammonium sulphate		: NOAEL (chronic; rat): 256 mg/kg bw/day Route of application: oral Exposure time: 52 weeks NOAEC (sub-acute; rat (male)): 300 mg/m <sup>3</sup> Route of application: inhalation Exposure time: 14 days (8 h/day)

#### Aspiration hazard

No data available.

#### Neurological effects

No data available.

#### Toxicology, metabolism, distribution

No data available.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Toxicity to fish:

Ammonium drogenorthophosphate	di hy-	: LC <sub>50</sub> (Oncorhynchus mykiss): > 85.9 mg/l Exposure time: 96 h
Diammonium hydrogenorthophosphate		: LC <sub>50</sub> (Cirrhinus mrigala): 1,700 mg/l Exposure time: 96 h
Ammonium sulphate		: LC <sub>50</sub> (Oncorhynchus mykiss): 53 mg/l Exposure time: 96 h

#### Toxicity to daphnia and other aquatic invertebrates:

Ammonium sulphate		: EC <sub>50</sub> (Ceriodaphnia acanthina): 169 mg/l
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Diammonium hydrogenortho- : Exposure time: 48 h  
phosphate : EC<sub>50</sub> (Daphnia carinata): 1,790 mg/l  
Exposure time: 72 h  
Ammonium dihy- : EC<sub>50</sub> (Daphnia carinata): 1,790 mg/l  
drogenorthophosphate : Exposure time: 72 h

#### Toxicity to aquatic plants:

Diammonium hydrogenortho- : IC<sub>50</sub> (Pseudokirchnerella subcapitata): > 100 mg/l  
phosphate : Exposure time: 72 h  
Ammonium dihy- : IC<sub>50</sub> (Pseudokirchnerella subcapitata): > 100 mg/l  
drogenorthophosphate : Exposure time: 72 h  
Ammonium sulphate : IC<sub>50</sub> (Chlorella vulgaris): 2,700 mg/l  
Exposure time: 72 h

#### Long-term study fish/daphnia and other aquatic invertebrates/aquatic plants:

Ammonium sulphate : NOEC (Hyalella azteca): 3.12 mg/l  
Exposure time: 10 weeks  
Diammonium hydrogenortho- : NOEC (Pseudokirchnerella subcapitata): 100 mg/l  
phosphate : Exposure time: 3 days  
Ammonium dihy- : NOEC (Pseudokirchnerella subcapitata): 100 mg/l  
drogenorthophosphate : Exposure time: 3 days

#### **12.2 Persistence and degradability**

Biodegradability : Not applicable.

#### **12.3 Bioaccumulation potential**

No data available.

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

No data available.

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

No data available.

#### **12.6 Other adverse effects**

Adsorbed organic bound : Not included  
halogens (AOX)

Additional ecological infor- : The product should not be allowed to enter drains, water  
mation courses or the soil.

## SECTION 13: DISPOSAL CONSIDERATIONS

#### **13.1 Waste treatment methods**

Advice on disposal and : Disposal:  
packaging  
In accordance with local and national regulations. Do not dispose of waste into sewer. This material and its container must be disposed of in a safe way. Do not dispose of together with household waste. Waste codes should be assigned by the user based on the application for which the product was used.

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#### **SECTION 14: TRANSPORT INFORMATION**

**ADR**

Not dangerous goods

**RID**

Not dangerous goods

**IATA**

Not dangerous goods

**IMDG**

Not dangerous goods

**Special precautions for the user**

See Section 6, 7 and 8

#### **SECTION 15: REGULATORY INFORMATION**

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

Special labelling of certain : Restricted to professional users.  
mixtures

Seveso Directive : Directive 2012/18/EU does not apply.  
(2012/18/EU)

**15.2 CSA**

The Chemical Safety Assessment was undertaken. The product is a preparation.

#### **SECTION 16: OTHER INFORMATION**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.