

**SAFETY DATA SHEET**

according to REGULATION (EC) 1907/2006, as amended.

**DIAMMONIUM PHOSPHATE, DAP**

Date of revision: 27.11.2019

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Trade names:** Diammonium phosphate, DAP**1.2. Relevant identified uses of the substance or mixture and uses advised against****Identified uses:** Fertilizer**Uses advised against:** Not specified**1.3. Details of the supplier of the safety data sheet****Supplier:** „Aurepio” Sp. z o. o.  
Al. Jana Pawła II 11  
00-828 Warszawa, Poland**Supplier's phone number:** + 48 22 652 90 61 to 64**E-mail of person responsible for the safety data sheet:** [aurepio@aurepio.pl](mailto:aurepio@aurepio.pl)**1.4. Emergency telephone number****Emergency telephone number in Poland:****112** (24 h) or**+48 22 652 90 61 to 64** (Monday -Friday, at hours: 8 a.m. – 4 p.m.).

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**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 as amended.****The mixture does not meet the criteria for classification.****Human health effects**

In case of significant dust concentrations or direct product penetration into eyes, irritation, redness, tearing, burning, itching may occur. Contact with the skin may cause itching, local redness. Prolonged inhalation of dust may cause slight irritation of the respiratory tract, irritation of the nasal mucosa and mouth, coughing. Swallowing may cause damage of mucous membrane of the digestive tract, vomiting and diarrhea.

**Environmental effects**

It is not harmful for the environment, if used correctly.

**Physical effects**

They are not known.

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**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008 as amended.****Pictograms:** Not required.**Signal word:** Not required.**Hazard statements:** Not required.**Precautionary statements:** Not required**Additional labeling requirements:**

EUH210 - Safety data sheet available on request (professional use).

**2.3. Other hazards**

The criteria described in Annex XIII (PBT and vPvB properties) do not apply to inorganic substances.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Product identifier:** Diammonium phosphate, DAP**Components:**

Substance's name	Index number	CAS number	EC Number	Mass fraction in %	Hazard classes and category codes	Hazard statement codes
Diammonium hydrogenorthophosphate * REACH registration number: 01-2119490974-22-XXXX	-	7783-28-0	231-987-8	≥ 70	-	-
Ammonium Dihydrogenorthophosphate * REACH registration number: 01-2119488166-29-XXXX	-	7722-76-1	231-764-5	≥ 10	-	-

**Impurities:**

Ammonium sulphate* REACH registration number: 01-2119455044-46-XXXX	-	7783-20-2	231-984-1	-	-	-
Magnesium sulphate* REACH registration number: 01-2119489441-34-XXXX	-	7487-88-9	231-298-2	-	-	-
Calcium sulfate ** REACH registration number: 01-2119444918-26-XXXX	-	7778-18-9	231-900-3	-	-	-

\* Designated NDS for dusts

\*\* Designated NDS for Calcium sulfate

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**SECTION 4: First aid measures****4.1. Description of first aid measures**

<b>Inhalation:</b>	Move the injured person from the risk area, arrange a comfortable reclining or sitting position, ensure peace, heat. Call a doctor if necessary.
<b>Skin contact:</b>	Take off immediately contaminated clothing and wash the skin thoroughly with lukewarm, running water. Call a doctor if necessary.
<b>Eye contact:</b>	Rinse immediately with plenty of cold water, preferably running water for at least 15 minutes. Remove contact lenses. Avoid a strong water jet due to the risk of mechanical damage to the cornea. If irritation persists, get medical attention.
<b>Gastrointestinal tract:</b>	If swallowed, do not induce vomiting. Rinse mouth with water and then give a large amount of water to drink. Consult a doctor if necessary.

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

Significant dust concentrations or direct product penetration into eyes may cause irritation, redness, tearing, burning, itching. Contact with skin may cause itching, local redness. Prolonged inhalation of dust may cause slight irritation of the respiratory tract, irritation of the nasal mucosa and mouth, coughing. Swallowing may cause damage of mucous membrane of the digestive tract, vomiting and diarrhea.

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

No special recommendations. Use symptomatic treatment.

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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

Suitable extinguishing media: The product is not flammable. Use extinguishing media appropriate for materials that are burning in surrounding area.

Unsuitable extinguishing media: Full water jet.

**5.2. Special hazards arising from the substance or mixture**

In case of fire, toxic fumes may release containing: nitrogen oxides, phosphorus oxides, ammonia.

**5.3. Advice for firefighters**

Wear gas-tight protective clothing and breathing apparatus that is independent of ambient air.  
Requirements for protective clothing: EN 469

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**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Wear personal protective equipment. Mark the hazard area and prevent access to unauthorized persons. Avoid raising dust.

**6.2. Environmental precautions**

Protect against penetration into sewers, surface and ground waters and soil.

**6.3. Methods and material for containment and cleaning up**

Place the damaged packaging in the replacement packaging. Collect the released product mechanically, avoiding dust collection, transfer into tightly closed containers and dispose for disposal. Rinse the contaminated surface with large amounts of water.

**6.4. Reference to other sections**

Follow the instructions in section 7.

Detailed information on personal protective equipment is given in section 8.

Remove as directed in section 13.

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**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Take precautions to avoid contact with skin and eyes when working with the mixture. Do not breathe dust. Do not eat, drink or smoke during use. Wash hands during breaks and after work. Remove contaminated clothing immediately, wash before re-use. Keep away from heat and sources of ignition. Use in rooms with general ventilation.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in original, properly labelled, tightly closed containers in a cool, well-ventilated place accessible only to authorized persons. Keep away from children. Protect against moisture. Do not store together with food, drinks and animal feeds. Do not store with incompatible materials - see section 10. Store in packaging made of paper, polyethylene or polypropylene.

**7.3. Specific end use(s)**

No information on applications other than mentioned in subsection 1.2.

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**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Recommended procedures for monitoring air cleanliness in the work environment:**

EN 689 Air at workplaces. Guidelines for the assessment of inhalation exposure to chemical agents by comparison with limit values and measurement strategy

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EN 1540 Air at workplaces. Terminology PN-Z-04008-7: 2002 / Az1: 2004 and PN-Z-04008-7: 2002  
 - Polish version. Air purity protection - Sampling - Principles of air sampling in the work environment and interpretation of results

**For Poland:**

Component	CAS No.	Normative	Value	Unit	Legal base
<b>Dusts not classified for toxicity</b>					
- inhalable fraction	-	NDS	10	mg/m <sup>3</sup>	O.J.2018.0.1286

**Calcium sulfate**

(Calcium (VI) sulfate (gypsum))

- inhalable fraction	7778-18-9	NDS	10	mg/m <sup>3</sup>	O.J.2018.0.1286
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**Diammonium hydrogenorthophosphate, CAS: 7783-28-0**DNEL/DMEL<sub>worker</sub> (skin, long-term, systemic effects) 34.7 mg/kg body weight/dayDNEL/DMEL<sub>worker</sub> (inhalation, long-term, systemic effects) 6.1 mg/m<sup>3</sup>DNEL/DMEL<sub>consumer</sub> (oral, long-term, systemic effects) 2.1 mg/kg body weight/dayDNEL/DMEL<sub>consumer</sub> (inhalation, long-term, systemic effects) 1.8 mg/m<sup>3</sup>DNEL/DMEL<sub>consumer</sub> (skin, long-term, systemic effects) 20.8 mg/kg body weight/dayPNEC<sub>fresh water</sub> 1.7 mg/lPNEC<sub>marine water</sub> 0.17 mg/lPNEC<sub>sewage treatment plant</sub> 10 mg/l**Ammonium Dihydrogenorthophosphate, CAS: 7722-76-1**DNEL/DMEL<sub>worker</sub> (skin, long-term, systemic effects) 34.7 mg/kg body weight/dayDNEL/DMEL<sub>worker</sub> (inhalation, long-term, systemic effects) 6.1 mg/m<sup>3</sup>DNEL/DMEL<sub>consumer</sub> (oral, long-term, systemic effects) 2.1 mg/kg body weight/dayDNEL/DMEL<sub>consumer</sub> (inhalation, long-term, systemic effects) 1.8 mg/m<sup>3</sup>DNEL/DMEL<sub>consumer</sub> (skin, long-term, systemic effects) 20.8 mg/kg body weight/dayPNEC<sub>fresh water</sub> 1.7 mg/lPNEC<sub>marine water</sub> 0.17 mg/lPNEC<sub>intermittent, fresh water</sub> 17 mg/lPNEC<sub>sewage treatment plant</sub> 10 mg/l**8.2. Exposure controls****8.2.1. Appropriate engineering controls**

Use efficient ventilation.

**8.2.2. Individual protection measures, such as personal protective equipment**

**Respiratory system:** In the event of a high concentration of dust, use respiratory protection with a particulate filter marked in white and P in accordance with EN 149 or EN 143.

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**Hands and skin:** When handling large quantities, wear protective clothing made of natural materials, gloves made of rubber (thickness  $\geq 0.4 \text{ mm} \pm 0.1 \text{ mm}$ , breakthrough time  $> 480 \text{ min}$ ), protective footwear. Gloves must comply with the standard: EN 374.

Requirements for protective clothing: ISO 13982-1.

**Eyes:** Wear safety goggles according to EN 166.

**Hygiene at work:** Observe the general industrial hygiene provisions. Do not allow for to exceeded permissible normative concentrations at work. Remove contaminated clothing after work. Wash hands and face before breaks at work. Wash the entire body thoroughly after work. Do not eat, drink or smoke during work. Do not breathe dust.

**8.2.3. Environmental exposure controls**

Secure against entering the municipal water, sewage system and watercourses.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

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|---|--|
| a) Appearance:                                  | Light grey or yellow-brown and black granules, 2-5mm   |
| b) Odour  | Slight ammonia   |
| c) Odour threshold                              | No data available.   |
| d) pH   | No data available.   |
| e) Melting point/freezing point                 | 155 °C   |
| f) Initial boiling point and boiling range      | No data available.   |
| g) Flash point                                  | No data available.   |
| h) Evaporation rate                             | No data available.   |
| i) Flammability (solid, gas)                    | The mixture is not flammable.  |
| j) Upper/lower flammability or explosive limits | It does not pose an explosion hazard.  |
| k) Vapour pressure                              | 0.0762 Pa  |
| l) Vapour density                               | No data available.   |
| m) Relative density                             | 1.62 (water=1)   |
| n) Solubility                                   | Water: $> 100 \text{ g/l}$ (20 °C)   |
| o) Partition coefficient: n-octanol/water       | No data available.   |
| p) Auto-ignition temperature                    | No data available.   |
| q) Decomposition temperature                    | $> 155 \text{ °C}$   |
| r) Viscosity                                    | According to point 2 of Annex XI to the Regulation (EC) 1907/2006 the test does not have to be performed.<br>The mixture is a solid. |
| s) Explosive properties                         | It does not pose an explosion hazard.  |

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- t) Oxidising properties
- According to entries in column 2 of Annex VII to the REACH Regulation, the study does not need to be performed. Based on the chemical structure and taking into account the chemical properties, no oxidizing properties are expected.

**9.2. Other information**

Density in the loose state:  $\approx 1000 \text{ kg/m}^3$ .  
The product has hygroscopic properties.

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**SECTION 10: Stability and reactivity****10.1. Reactivity**

No reactivity under the recommended transport or storage conditions.

**10.2. Chemical stability**

The mixture is stable under the recommended conditions of transport or storage.

**10.3. Possibility of hazardous reactions**

They are not known.

**10.4. Conditions to avoid**

Moisture, heat and sources of ignition, temperatures  $> 155 \text{ }^\circ \text{C}$  (decomposition).

**10.5. Incompatible materials**

Strong acids and bases, strong oxidants.

**10.6. Hazardous decomposition products**

Ammonia, phosphorus oxides.

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**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity:**

Based on available data, the classification criteria are not met.

**Skin corrosion / irritation:**

Based on available data, the classification criteria are not met.

**Serious eye damage / eye irritation:**

Based on available data, the classification criteria are not met.

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**Respiratory or skin sensitization:**

Based on available data, the classification criteria are not met.

**Germ cell mutagenicity:**

Based on available data, the classification criteria are not met.

**Carcinogenicity:**

Based on available data, the classification criteria are not met.

**Reproductive toxicity:**

Based on available data, the classification criteria are not met.

**Specific target organ toxicity - single exposure**

Based on available data, the classification criteria are not met.

**Specific target organ toxicity - repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard:**

Based on available data, the classification criteria are not met.

**Health effects of local exposure**

<b>Inhalation:</b>	Prolonged inhalation of dust may cause slight irritation of the respiratory tract, irritation of the nasal mucosa and mouth, coughing.
<b>Eye contact:</b>	Significant dust concentrations or direct product penetration into eyes may cause irritation, redness, tearing, burning, itching.
<b>Skin contact:</b>	It can cause itching, local redness.
<b>Swallowing:</b>	Contact with skin may cause itching, local redness. Swallowing may cause damage of mucous membrane of the digestive tract, vomiting and diarrhea.

**SECTION 12: Ecological information****12.1. Toxicity**

Based on available data, the classification criteria are not met.

**12.2. Persistence and degradability**

No data available.

Not determined for inorganic substances.

**12.3. Bioaccumulative potential**

It has the low potential for bioaccumulation due to the fact that in water solutions the main components of fertilizers are represented by ions of ammonia ( $\text{NH}_4^+$ ), ions of potassium ( $\text{K}^+$ ), phosphate ions ( $\text{PO}_4^{3-}$ ), ions of sulfate ( $\text{SO}_4^{2-}$ ), and chloride ions ( $\text{Cl}^-$ ).

**Octanol / water partition coefficient (Kow):** Not determined for inorganic substances.

**Bioconcentration factor (BCF):** No data available for the mixture.



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**12.4. Mobility in soil**

No data available.

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

The criteria described in Annex XIII (PBT and vPvB properties) do not apply to inorganic substances.

**12.6. Other adverse effects**

No data available.

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**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Product**

Do not dispose together with municipal waste. Do not allow contamination of ground and surface water. If possible, use all amount of the product. Possible remnants should be given to an authorized waste recipient.

**Package**

Empty the packaging thoroughly. Reusable packaging can be reused after thoroughly cleaning. Disposable packaging (after thoroughly cleaning) can be recycled. Proceed in accordance with country and local regulations. Empty and clean packaging can be disposed to municipal waste stream.

**Special precautions:**

There are no special recommendations.

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**SECTION 14: Transport information**

**This product is not classified as dangerous within the meaning of transport regulations.**

**ADR/RID, IMDG, IATA**

<b>14.1. UN number</b>	Not applicable.
<b>14.2. UN proper shipping name</b>	Not applicable.
<b>14.3. Transport hazard class(es)</b>	Not applicable.
<b>14.4. Packing group</b>	Not applicable.

**14.5. Environmental hazards**

The mixture does not pose a risk to the environment in accordance with the criteria contained in the UN Model Regulations.

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**14.6. Special precautions for user**

No special recommendations.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

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**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Regulation of the Minister of Agriculture and Rural Development of 24 June 2002 on occupational health and safety in the use and storage of plant protection products as well as mineral and organic-mineral fertilizers (Dz.U.2002.99.896), as amended.

Regulation (EC) 1907/2006 of the European Parliament and of the Council of 18 December 2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94, as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000 / 21 / EC (OJ EU L series No. 396 of 30 December, 2006), as amended.

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (EC) No 1272/2008 of 16 December 2008 on the classification, Labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006 (OJ EU L Series No. 353 of 31 December, 2008), as amended.

Act of 25 February 2011 on chemical substances and mixtures (Book of Acts 2011.63.322), as amended.

Regulation of the Minister of Health of 30 December, 2004 on occupational health and safety connected with chemical agents at work (Book of Acts 2005.11.86), as amended.

Regulation of the Minister of Health of 2 February, 2011 on the testing and measurement of agents harmful to health in the work environment (Book of Acts 2011.33.166).

The Act of 14 December 2012 on waste (Book of Acts 2013.0.21), as amended.

Act of 13 June 2013 on the management of packaging and packaging waste (Book of Acts 2013.0.888), as amended.

Regulation of the Minister of Labor and Social Policy of 14.03.2000 on the safety and hygiene of work on manual transport work (Book of Acts 2000.26.313), as amended.

Regulation of the Minister of Labor and Social Policy of 6 June, 2014 on the highest allowable concentrations and intensities of agents harmful to health in the work environment (Book of Acts 2018.0.1286).

REGULATION (EC) No 2003/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 on fertilizers, as amended.

Act of 10 July 2007 on fertilizers and fertilization, Book of Acts 1997, No.147.1033, as amended.

Regulation of the Minister of Agriculture and Rural Development of 16 April 2008 on the detailed method of fertilizer application and conducting training in the field of their application,

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Dz.U.2008.80.479, as amended..

Regulation of the Minister of Economy of 8 September 2010 on the method of packaging mineral fertilizers, placing information on fertilizer components on these packaging, the method of testing mineral fertilizers and types of lime fertilizer, Dz.U.2010.183.1229.

Regulation of the Minister of Agriculture and Rural Development of 18 June 2008 on the implementation of certain provisions of the Act on fertilizers and fertilization, OJ 2008.119.765, as amended.

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**SECTION 16: Other information****Sources:**

- Safety data sheet in English, date of compilation: 04.12.2017

**Recommendations for training**

As a minimum there is recommended a safety training. Prior to working with the product the user is required to know the safety rules for safe handling of chemicals, and above all, hold appropriate workplace training.

**Abbreviations:**

**NDS** - Highest permissible concentration - value of weighted average of concentration, which impact on the employee during an 8-hour daily and average weekly working time, during the duration of its professional activity should not cause negative changes in his state of health and the health of the future generations

**DNEL** - level that does not cause harm to human health - the level of exposure to the substance not causing harmful effects to human health

**PNEC** - predicted concentration causing changes in the environment - the concentration of the substance below which there are no expected adverse effects on the environment

vPvB - substance very persistent and very bioaccumulative

PBT – substance persistent, bioaccumulative and toxic

**NOAEL** — *Highest dose* at which there *was not* an observed toxic or adverse effect.

**LOAEL** — *Lowest dose* at which there *was* an observed toxic or adverse effect.

**DMEL** - Derived Minimal Effect Level

**LD<sub>50</sub>**: Lethal Dose 50 %. The LD<sub>50</sub> corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval.

**LC<sub>50</sub>**: Lethal Concentration 50 %. The LC<sub>50</sub> corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval.

**EC<sub>50</sub>**: Effective Concentration 50 %. The EC<sub>50</sub> corresponds to the concentration of a tested substance causing 50% changes in response (e.g. on growth) during a specified time interval.

**BCF** - bioconcentration factor - the ratio of the concentration of substances in the body to its concentration in water at equilibrium

**ADR**- Agreement on Dangerous Goods by Road

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RID - Regulations Concerning the International Transport of Dangerous Goods by Rail

IMDG - International Maritime Dangerous Goods Code

IATA - International Air Transport Association

CAS - number assigned to a chemical substance on the list of Chemical Abstracts Service

EC - the reference number used in the European Union in order to identify hazardous substances, in particular, registered in the European Inventory of Existing Commercial Chemical Substances (EINEC) or the European List of Notified Chemical Substances (ELINCS) or the list of chemical substances listed in the publication of "No-longer polymers"

UN number - four-digit identification number of the material in the list of dangerous materials of the United Nations, based on the "UN Model Regulations", which classified material is an individual, mixture or article

The information contained in this safety data sheet are based on the current state of knowledge and data from a supplier. They are not a guarantee of specific properties of the product and does not relieve users of responsibility for the appropriate use of this information. The supplier will not be liable for any damages or losses that might arise from the use of this product.

**Changes**

Changes to the previous version are marked with a vertical bold line on the left of the text.