



SAFETY DATA SHEET

DIAMMONIUM HYDROGENORTHOPHOSPHATE

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

1.1. Product identifier

Product name	DIAMMONIUM HYDROGENORTHOPHOSPHATE
Product number	21385
Synonyms; trade names	DIAMMONIUM ORTHOPHOSPHATE, DIAMMONIUM HYDROGENPHOSPHATE, DIAMMONIUMFOSFAT (DAB) FG, DIAMMONIUM PHOSPHATE GRANULAR FOOD GRADE, DIAMMONIUM PHOSPHATE TECHNICAL GRADE, PRAYPHOS DAP, PRAYHPOS DAP FG, DIAMMONPHOSPHAT, DIAMM PHOS XTL
REACH registration number	01-2119490974-22-XXXX
REACH registration notes	This product is not classified as hazardous, the information in this datasheet is given for guidance only.
CAS number	7783-28-0
EC number	231-987-8

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

Identified uses	Food industry Manufacture of fertilizers Fire- resistant agent Paper production Industrial application Chemical Intermediate
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1.3. Details of the supplier of the safety data sheet

Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com
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1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	21385

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

2.2. Label elements

EC number	231-987-8
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DIAMMONIUM HYDROGENORTHOPHOSPHATE

Hazard statements NC Not Classified

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	DIAMMONIUM HYDROGENORTHOPHOSPHATE
REACH registration number	01-2119490974-22-XXXX
REACH registration notes	This product is not classified as hazardous, the information in this datasheet is given for guidance only.
CAS number	7783-28-0
EC number	231-987-8
Composition comments	The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Keep affected person under observation. Never give anything by mouth to an unconscious person.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Do not give milk or alcoholic beverages Do not induce vomiting. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

Eye contact	Solid particles trapped behind the eyelid may cause abrasive damage.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

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Specific hazards	When heated and in case of fire, toxic vapours/gases may be formed.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Ammonia. Oxides of the following substances: Carbon. Nitrogen. Phosphorus.
<u>5.3. Advice for firefighters</u>	
Protective actions during firefighting	Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Avoid the spillage or runoff entering drains, sewers or watercourses. Contain and collect extinguishing water.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of dust and contact with skin and eyes. Avoid generation and spreading of dust.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Stop leak if safe to do so. Remove spillage with vacuum cleaner or collect with a shovel and broom, or similar. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of dust and contact with skin and eyes. Avoid handling which leads to dust formation. Do not eat, drink or smoke when using this product.
Advice on general occupational hygiene	Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry and cool place. Store away from the following materials: Alkalis. Oxidising materials. Do not store near heat sources or expose to high temperatures. Protect from moisture.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

DIAMMONIUM HYDROGENORTHOPHOSPHATE

Ingredient comments

No exposure limits known for ingredient(s).

DNEL

Workers - Dermal; Long term systemic effects: 34.7 mg/kg/day
 Workers - Inhalation; Long term systemic effects: 6.1 mg/m³
 General population - Oral; Long term systemic effects: 2.1 mg/kg/day
 General population - Inhalation; Long term systemic effects: 1.8 mg/m³
 General population - Dermal; Long term systemic effects: 20.8 mg/kg/day

PNEC

- Fresh water; 1.7 mg/l
 - marine water; 0.17 mg/l
 - Intermittent release; 17 mg/l
 - STP; 10 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The selected gloves should have a breakthrough time of at least 8 hours. Nitrile rubber. glove thickness 0.11mm To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m³. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Particulate filter, type P2. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Crystalline powder.

Colour

White/off-white.

Odour

Odourless. to Ammonia.

Odour threshold

No information available.

pH

pH (diluted solution): 7.5 - 8.5 (1%)

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Melting point	155°C
Pour Point	No information available.
Freezing Point	No information available.
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.94 - 1.62
Bulk density	500 - 800 kg/m ³
Solubility(ies)	~ 690 - 700 g/l water @ 20°C Soluble in water. Insoluble in the following materials: Organic solvents.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	150°C
Viscosity	No information available.
Explosive properties	Based on available data the classification criteria are not met.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	No information available.
Particle size	No information available.
Molecular weight	132 g/mol
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

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Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong alkalis. Strong oxidising agents. Moisture.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Ammonia. Oxides of the following substances: Carbon. Nitrogen. Phosphorus.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met. LD₅₀ > 2000 mg/kg, Oral, Rat OECD 425

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met. LD₅₀ > 5000 mg/kg, Dermal, Rabbit OECD 402

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met. LD₅₀ > 5000 mg/m³, Inhalation, Rat

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met. Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met. Not irritating. Rabbit

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met. Local Lymph Node Assay (LLNA) - Mouse: Not sensitising. OECD 429

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met. Ames test: Negative.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met. Does not contain any substances known to be carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met. Fertility, Screening - NOAEL >= 1500 mg/kg/day, Oral, Rat OECD 422

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Reproductive toxicity - development Based on available data the classification criteria are not met. Developmental toxicity: - NOAEL: ≥ 1500 mg/kg, Oral, Rat OECD 422

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

Toxicokinetics The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Inhalation Dust in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Skin irritation should not occur when used as recommended.

Eye contact Solid particles trapped behind the eyelid may cause abrasive damage.

SECTION 12: Ecological information

Ecotoxicity The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 155 mg/l, Fish
LC₅₀, 96 hour: 1700 mg/l, Fish
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 1790 mg/l, Freshwater invertebrates

Acute toxicity - aquatic plants NOEC, Chronic, : 100 mg/l, Selenastrum capricornutum
OECD 201

Acute toxicity - microorganisms NOEC, : 100 mg/l, Activated sludge
OECD 209

12.2. Persistence and degradability

Persistence and degradability The product contains only inorganic substances which are not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

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Results of PBT and vPvB assessment

This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

Waste should be treated as controlled waste. Do not puncture or incinerate, even when empty.

Disposal methods

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

No information required.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information required.

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
COMMISSION REGULATION (EU) 2020/878 of 18 June 2020

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15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
 Aquatic Acute = Hazardous to the aquatic environment (acute)
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

DIAMMONIUM HYDROGENORTHOPHOSPHATE**Revision date** 23/02/2023**Version number** 5.000**Supersedes date** 16/11/2022**SDS number** 21385**SDS status** Approved.**Signature** Lisa Bland

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