# SAFETY DATA SHEET (SDS)

in accordance with Regulation (EC) No 1907/2006 (REACH), Annex II — Regulation (EU) 2020/878

Date: 21.10.2026 | Version: 6 | EN

## Ammonium dihydrogen phosphate

*azanium dihydrogen phosphate*

**CAS 7722-76-1**

$H_6NO_4P$ | EC 231-764-5

MOLAR MASS
**115.03**

### HAZARD CLASSIFICATION (GHS / CLP)



**Warning**

H319

*Classification from aggregated ECHA C&L notifications (PubChem PUG-View); notifier consensus <75% — protective approach (all reported hazards). Requires verification against the official source (ECHA C&L / manufacturer's data sheet).*

## 1. Identification of the substance/mixture and of the company/undertaking

| | |
|---|---|
| **1.1 Substance name** | Ammonium dihydrogen phosphate |
| **1.1 IUPAC name** | azanium dihydrogen phosphate |
| **1.1 CAS number** | 7722-76-1 |
| **1.1 EC number** | 231-764-5 |
| **1.1 PubChem CID** | 24402 |
| **1.1 InChIKey** | LFVGISIMTYGQHF-UHFFFAOYSA-N |
| **1.1 SMILES** | [NH4+].OP(=O)(O)[O-] |
| **1.1 Molecular formula** | $H_6NO_4P$ [7] |
| **1.1 Molar mass** | 115.03 g/mol [7] |
| **1.1 Exact mass** | 115.0034 Da [7] |

### 1.2 Uses

For laboratory and research purposes. Not for use in the production of food, medicines or cosmetics without appropriate authorisation.

### 1.3 Details of the supplier

| | |
|---|---|
| REFERENCE COPY — NO SUPPLIER DETAILS — NOT FOR DISTRIBUTION | Supplier details are not included in this reference copy. The supplier placing the substance on the market must complete this section and remains responsible for the sheet under REACH. MolGod.org prepares documentation and is not the supplier of this substance. |

### 1.4 Emergency telephone number

| | |
|---|---|
| **Emergency telephone** | 112 (EU-wide emergency number) |

Contact the poison centre designated in the country of placing on the market (CLP Art. 45).

## 2. Hazards identification

**GHS:**



**PPE:**



**Warning**

### Hazard statements (H) [3][4]

| | |
|---|---|
| **H319** | Causes serious eye irritation |

### Precautionary statements (P) [3][4]

| | |
|---|---|
| **P264** | Wash thoroughly after handling |
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection |
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes; Remove contact lenses, if present and easy to do. Continue rinsing |
| **P337+P313** | If eye irritation persists: Get medical advice/attention |
| **P501** | Dispose of contents/container to an approved waste collection point |

**Classification from aggregated ECHA C&L notifications (PubChem PUG-View); notifier consensus <75% — protective approach (all reported hazards). Requires verification against the official source (ECHA C&L / manufacturer's data sheet).**

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## 3. Composition/information on ingredients

| | |
|---|---|
| **Substance type** | pure substance |
| **CAS Number** | 7722-76-1 |
| **EC number** | 231-764-5 |
| **Molecular formula** | $H_6NO_4P$ |
| **Concentration** | ≥99% (typical reagent-grade purity — to be confirmed by the supplier's specification) |

## 4. First aid measures



### Inhalation

Move the affected person to fresh air. Keep at rest. If not breathing: artificial respiration (qualified personnel only). [1][2][10]

### Skin contact

Remove contaminated clothing. Rinse skin with soap and water (min. 15 minutes). [1][2][10]

### Eye contact

Rinse eyes with running water (min. 15 minutes). Remove contact lenses if possible. If irritation persists — consult an ophthalmologist. [1][2][10]

### Ingestion

Do NOT induce vomiting (unless directed by a physician). Rinse mouth with water. Never give anything by mouth to an unconscious person. Emergency number: 112 (EU-wide). Contact the poison centre designated in your country (CLP Art. 45). [1][2][10]

### Symptoms and effects

eye irritation and watering. [3]

### Notes for physician

Requires verification

**Emergency numbers: Emergency: 112 (EU-wide). Poison centre: as designated in the country of placing on the market (CLP Art. 45).**

## 5. Firefighting measures

| | |
|---|---|
| **Suitable extinguishing media** | Adapt extinguishing media to surroundings. CO2, dry powder, foam. |
| **Unsuitable extinguishing media** | No specific restrictions. |
| **Specific hazards** | Thermal decomposition products: NOx, P2O5. [11] |
| **Advice for firefighters** | Use self-contained breathing apparatus (SCBA). Full protective suit. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions** | Use personal protective equipment (see Section 8). Avoid breathing dust. [1][2][10] |
| **Environmental precautions** | Prevent entry into sewers, groundwater and surface water. [1][2][10] |
| **Methods for containment and cleaning up** | Collect mechanically into suitable containers. Absorption: sand, vermiculite, diatomaceous earth. Do not sweep dry (dust formation). [1][2][10] |
| **Related sections** | 8; 13 |

## 7. Handling and storage

| | |
|---|---|
| **Precautions** | Work in a fume hood or with adequate ventilation. No eating, drinking or smoking in the work area. [1][2][10] |
| **Storage temperature** | Store at room temperature (15-25°C) or as indicated on the label. [1][2][10] |

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| | |
|---|---|
| **Humidity** | Store in a dry place (<60% RH). [1][2][10] |
| **Light** | Protect from direct sunlight. [1][2][10] |
| **Incompatible materials** | Strong oxidizers, strong acids, strong bases. [11] |

## 8. Exposure controls/personal protection

### 8.1 Control parameters

| | |
|---|---|
| **OEL — NDS (Poland)** | No NDS (OEL) value in the available working list — verify in the current MRPiPS regulation before use; do not assume the absence of a limit value. |
| **OEL (EU)** | The EU OEL value has not been verified against the available dataset — check the IOELV/BOELV directives; do not assume the absence of a value. |
| **DNEL** | No data available. |
| **PNEC** | No data available. |

### 8.2 Personal protective equipment (PPE) [5][6][12]



**Chemical-resistant protective gloves**
EN ISO 374-1:2016+A1:2018
nitrile (min. 0.11 mm)

**Closed safety spectacles or goggles**
EN ISO 16321-1:2022 / EN 166:2001

**Closed safety footwear with toe protection**
EN ISO 20345:2022 (S2/S3)

## 9. Physical and chemical properties

| Property (item 9.1) | Value | Source |
|---|---|---|
| **Physical state** | Solid | |
| **Colour** | No data available. | |
| **Odour** | Odorless [7] | |
| **pH (1% aqueous solution)** | No data available. | |
| **Melting point** | 190°C (experimental data) [7] | |
| **Boiling point** | No data available. | |
| **Flash point** | Not applicable (REACH 9.1(h)) | |
| **Flammability** | No data available. | |
| **Lower and upper explosion limit** | Not applicable (REACH 9.1(g)) | |
| **Density (20°C)** | 1.801 g/cm³ [7] | |
| **Vapour pressure** | No data available. | |
| **Relative vapour density** | Not applicable (REACH 9.1(q)) | |
| **Kinematic viscosity** | Not applicable (REACH 9.1(l)) | |
| **Refractive index $nD^{20}$** | 1.525 (experimental data) [7] | |
| **Auto-ignition temperature** | No data available. | |
| **Decomposition temperature** | Not applicable | |
| **Water solubility** | No data available. | |

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| Property (item 9.1) | Value | Source |
|---|---|---|
| **Particle characteristics** | The particle size distribution has not been determined for this commercial form — required under Annex II 9.1(r); to be completed from the supplier's specification. | |
| **log Kow (XLogP3)** | No data available. | |
| **Molar mass** | 115.03 g/mol [7] | |
| **Molecular formula** | $H_6NO_4P$ [7] | |

Where a property above reads "No data available", no measured value was found in the public sources consulted for this substance. The property has not been determined by MolGod.org and no value is inferred. "Not applicable" means the property has no meaning for this substance in the form supplied.

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | Stable under normal storage and handling conditions. |
| **Chemical stability** | Thermally stable under recommended conditions. |
| **Hazardous reactions** | No hazardous reactions known under normal conditions. |
| **Conditions to avoid** | High temperatures, direct sunlight, moisture. |
| **Incompatible materials** | Strong oxidizers, strong acids, strong bases. |
| **Decomposition products** | Thermal decomposition products: NOx, P2O5. |

## 11. Toxicological information

| | |
|---|---|
| **LD50 (oral)** | LD50 5750 mg/kg (rat, oral) [7] |
| **LD50 (dermal)** | LD50 >7940 mg/kg (rabbit) [7] |
| **LC50 (inhalation)** | No data available. |
| **Skin irritation** | No data available. |
| **Eye irritation** | Category 2 — eye irritation. |
| **Sensitisation** | No data available. |
| **Mutagenicity** | No data available. |
| **Carcinogenicity** | No data available. |
| **IARC classification (carcinogenicity)** | No individual IARC monograph for this CAS — this is not confirmation of the absence of carcinogenicity (cf. CLP/GHS classification in section 2). |
| **Reproductive toxicity** | No data available. |
| **STOT — single exposure** | No data available. |
| **STOT — repeated exposure** | No data available. |
| **Aspiration hazard** | No data available. |

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## 12. Ecological information

| | |
|---|---|
| **Aquatic toxicity** | No data available. |
| **Persistence / biodegradability** | No data available. |
| **Bioaccumulative potential** | No data available. |
| **Mobility in soil** | No data available. |
| **PBT/vPvB assessment** | Insufficient data to assess PBT/ vPvB. |
| **Endocrine disrupting properties** | No information. |

## 13. Disposal considerations

| | |
|---|---|
| **Disposal method** | Hand over for disposal to licensed contractors in accordance with national and local regulations. Do not discharge into sewers. |
| **Waste code (EWC)** | 16 05 06* — Laboratory and analytical chemicals (e.g. chemical reagents) containing hazardous substances. Verification of the EWC code required. [9] |
| **Packaging** | Cleaned packaging may be recycled. Contaminated packaging must be treated as hazardous waste. |

## 14. Transport information

| | |
|---|---|
| **UN number** | VERIFICATION REQUIRED — no verified UN assignment. |
| **Environmental hazard** | Environmental hazard for transport: not verified. Non-harmonised classification (outside CLP Annex VI) — verify aquatic toxicity (Section 12) and do NOT assume marine pollutant marking is not required; confirm per ADR 2.2.9 / IMDG before shipping. |
| **Special precautions** | Handle as dangerous goods according to the assigned class (ADR/IMDG/IATA); apply the precautions appropriate to that class. |
| **CN/HS code** | CN/HS code: verification required in the Eurostat Combined Nomenclature. |
| **Notes** | Transport classification not verified. Do not assume the absence of restrictions — check ADR/IMDG/IATA before shipping. |

## 15. Regulatory information

| | |
|---|---|
| **SVHC status** | SVHC status not verified against the available dataset — check the current ECHA Candidate List; do not assume absence. [1] |
| **REACH Annex XIV** | Not verified against the ECHA Authorisation List — check REACH Annex XIV. [1] |
| **REACH Annex XVII** | Not confirmed in the available Annex XVII dataset — verify against the current ECHA list before placing on the market; do not assume absence of restriction. [1] |

## 16. Other information

Legal status of classification: supplier self-classification under Art. 4(3) CLP — no harmonised entry in Annex VI.Entries with an entry-into-force date after 21.10.2026 were omitted as future (not yet applicable).

**Data aggregated automatically from public reference databases (PubChem, ECHA, NIST and others).**

### Scientific citations (1)

et al.. *Provisional Peer-Reviewed Toxicity Values for Ammonium Salts of Inorganic Phosphates: Monoammonium Phosphate (MAP) (CASRN 7722-76-1) Diammonium Phosphate (DAP) (CASRN 7783-28-0)*. (2021).

### Full text of H statements

| | |
|---|---|
| **H319** | Causes serious eye irritation |

### Full text of P statements

| | |
|---|---|
| **P264** | Wash thoroughly after handling |
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection |

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| | |
|---|---|
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes; Remove contact lenses, if present and easy to do. Continue rinsing |
| **P337+P313** | If eye irritation persists: Get medical advice/attention |
| **P501** | Dispose of contents/container to an approved waste collection point |

## Abbreviations

| | |
|---|---|
| **ADR** | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| **ATE** | Acute Toxicity Estimate |
| **CAS** | Chemical Abstracts Service |
| **CLP** | Classification, Labelling and Packaging (Reg. (EC) 1272/2008) |
| **CMR** | Carcinogenic, Mutagenic, toxic to Reproduction |
| **DNEL** | Derived No-Effect Level |
| **EC** | European Community number |
| **EPI** | Personal protective equipment |
| **GHS** | Globally Harmonized System |
| **IATA** | International Air Transport Association |
| **IMDG** | International Maritime Dangerous Goods Code |
| **SDS** | Safety Data Sheet |
| **LC50** | Lethal Concentration, 50% |
| **LD50** | Lethal Dose, 50% |
| **NDS** | Maximum admissible concentration (workplace, PL) |
| **NDSCh** | Short-term exposure limit (PL) |
| **OEL** | Occupational Exposure Limit |
| **PBT** | Persistent, Bioaccumulative and Toxic |
| **PNEC** | Predicted No-Effect Concentration |
| **REACH** | Registration, Evaluation, Authorisation and Restriction of Chemicals (Reg. (EC) 1907/2006) |
| **STOT** | Specific Target Organ Toxicity |
| **SVHC** | Substance of Very High Concern |
| **TPSA** | Topological Polar Surface Area |
| **vPvB** | very Persistent and very Bioaccumulative |

## Version history

| | |
|---|---|
| **v6 (21.10.2026)** | Based on supplier self-classification (ECHA C&L notifications; no harmonised entry in Annex VI). |

## References


[1] EP and Council. Reg.(EC) No 1907/2006 (REACH). Art.31, Annex II. OJ EU L 396/2006. URL: https://eur-lex.europa.eu/eli/reg/2006/1907/oj Accessed: 2026-10-21.

[2] European Commission. Reg.(EU) 2020/878 — amending Annex II REACH. OJ EU L 203/2020. From 01.01.2023. URL: https://eur-lex.europa.eu/eli/reg/2020/878/oj Accessed: 2026-10-21.

[3] EP and Council. Reg.(EC) 1272/2008 (CLP) + ATP 23. OJ EU L 353/2008. (2026-07-07) URL: https://eur-lex.europa.eu/eli/reg/2008/1272/oj Accessed: 2026-10-21.

[4] United Nations. GHS Rev.9. ST/SG/AC.10/30/Rev.9. New York and Geneva: United Nations, 2021. URL: https://unece.org/transport/dangerous-goods/ghs-rev9-2021 Accessed: 2026-10-21.

[5] ISO. ISO 7010:2019 — Graphical symbols. Safety signs. URL: https://www.iso.org/standard/72424.html Accessed: 2026-10-21.

[6] ISO. ISO 3864-1:2011 — Safety colours and safety signs. URL: https://www.iso.org/standard/51021.html Accessed: 2026-10-21.

[7] PubChem. National Center for Biotechnology Information (NIH/NLM), chemical compound database. URL: https://pubchem.ncbi.nlm.nih.gov/compound/24402

[8] ECHA. European Chemicals Agency — harmonised classification inventory (CLP Annex VI). URL: https://echa.europa.eu

[9] European Commission. Decision 2000/532/EC establishing a list of wastes (European Waste Catalogue). OJ EU L 226/3. URL: https://eur-lex.europa.eu/eli/dec/2000/532/oj

[10] European Chemicals Agency (ECHA). Guidance on the Compilation of Safety Data Sheets. Version 4.0. Helsinki: European Chemicals Agency, 2020. URL: https://echa.europa.eu/documents/10162/2324906/sds_en.pdf

[11] Urben, P.G., ed. Bretherick's Handbook of Reactive Chemical Hazards. 8th ed. Oxford: Academic Press.

[12] CEN. Personal protective equipment standards (EN ISO 374-1, EN 166, EN 149, EN 14387, EN ISO 20345). Brussels: European Committee for Standardization.


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[13] MRiPS Regulation of 12.06.2018 — NDS/NDN. Journal of Laws 2024 item 1017. URL: https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20240001017 Accessed: 2026-10-21.

## External links

NIST: https://webbook.nist.gov/cgi/cbook.cgi?ID=7722-76-1

**NFPA 704** (supplementary information — NFPA/USA system; not a required element of an EU safety data sheet under REACH Annex II)




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