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

1.1. Product identifier

Trade name: **AMMONIUM DIHYDROGENORTHOPHOSPHATE**

Article code: ADP

CAS Number:

7722-76-1

EC number:

231-764-5

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

Application of the substance / the mixture: X-rays monochromator crystal.

Uses advised against: Other uses than the identified uses indicated above.

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Saint-Gobain Cristaux & Détecteurs

104, Route de Larchant

F-77140 Saint-Pierre-Les-Nemours

Telephone: 0033 (0) 1 64 45 10 10

Fax: 0033 (0) 1 64 45 10 01

Further information obtainable from: customer.service.SGCD@saint-gobain.com

1.4. Emergency telephone number

Centre anti poison et de toxicovigilance (Intoxication centre)

Phone: Paris: +33 (0) 1 40 05 48 48, Marseille: +33 (0) 1 91 75 25 25

* SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

The substance is not classified according to the CLP regulation.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008: void

Hazard pictograms: void

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Signal word: void

Hazard statements: void

2.3. Other hazards

Results of PBT and vPvB assessment: This substance does not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.1. Substances

CAS No. Description

7722-76-1 ammonium dihydrogenorthophosphate (100%), uncoloured crystal

Identification number(s):

EC number: 231-764-5

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Take off all contaminated clothing.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

After eye contact:

Protect unharmed eye.
Rinse opened eye for several minutes under running water.
Remove contact lenses, if present and easy to do. Continue rinsing.
Seek medical treatment.

After swallowing:

Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

4.2. Most important symptoms and effects, both acute and delayed No further relevant information available.

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4.3. Indication of any immediate medical attention and special treatment needed
First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2. Special hazards arising from the substance or mixture

The product is non flammable.

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Harmful pyrolysis products

5.3. Advice for firefighters

Protective equipment:

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information:

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Avoid formation of dust.

Wear protective equipment. Keep unprotected persons away.

Remove persons from danger area.

Avoid any contact with eyes or skin.

Do not inhale dust / smoke / mist.

6.2. Environmental precautions Dumping into the environment must be prevented.

6.3. Methods and material for containment and cleaning up

Remove mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See section 1 for emergency contact details.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

* **SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with eyes or skin. Wear personal protective equipment.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Information about fire - and explosion protection:

No special measures required.

Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: Store only in the original container.

Information about storage in one common storage facility:

Keep away from food, drink and animal feeding stuffs.

Do not store together with acids.

Store away from bases.

Do not store together with:

Magnesium

Further information about storage conditions:

Store in cool, dry conditions in well sealed containers.

Protect from heat and direct sunlight.

Protect from humidity and water.

7.3. Specific end use(s) See section 1.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities:

Technical measures and the application of adequate working methods take priority over the use of personal protection equipment.

No further data; see item 7.

8.1. Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

DNELs		
Oral	DNEL - long term - systemic	2.1 mg/kg bw (consumer)

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Dermal	DNEL - long term - systemic	20.8 mg/kg bw (consumer)
		34.7 mg/kg bw (worker)
Inhalative	DNEL - long term - systemic	1.8 mg/m ³ (consumer)
		6.1 mg/m ³ (worker)

PNECs	
PNEC	1.7 mg/l (fresh water) 17 mg/l (intermittent release) 0.17 mg/l (marine water) 10 mg/l (sewage treatment plant)

Additional information: The lists valid during the making were used as basis.

8.2. Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid contact with the eyes and skin.

Do not inhale dust / smoke / mist.

Ensure that washing facilities are available at the work place.

Wash hands before breaks and at the end of work.

Do not eat, drink, smoke or sniff while working.

Immediately remove all soiled and contaminated clothing.

Store protective clothing separately.

Respiratory protection:

With correct and proper use, and under normal conditions, breathing protection is not required.

If technical suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, a self-contained breathing apparatus must be used!

Suitable respiratory protective equipment:

Filter P1

Filter P2

Protection of hands:

Tested protective gloves are to be worn. When handling chemical substances, chemical protective gloves must be worn with CE label including a four digit code. Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves:

Recommendation:

Rubber gloves

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Safety glasses

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Information

Appearance:

Form:	Solid Crystalline
Colour:	Uncoloured
Odour:	Odourless
Odour threshold:	Not determined.

pH-value: 4.2 (0.2M aqu. solution)

Change in condition

Melting point/Melting range:	190-197 °C
Boiling point/Boiling range:	Not applicable.

Flash point: Not applicable.

Flammability (solid, gaseous): Product is not flammable.

Ignition temperature: Not determined.

Decomposition temperature: > 197 °C

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Vapour pressure at 20 °C: < 0.00147 Pa

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Trade name: **AMMONIUM DIHYDROGENORTHOPHOSPHATE**

Density at 20 °C: 1.1-1.81 g/cm³

Bulk density at 20 °C: 1100 kg/m³

Solubility in / Miscibility with
water at 25 °C: > 10000 mg/l
Easily soluble.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

9.2. Other information Molecular weight: 115.3 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable under standard conditions (temperature, pressure) of storage and handling.

10.2. Chemical stability

The product is stable under standard conditions (temperature, pressure) of storage and handling.

10.3. Possibility of hazardous reactions No dangerous reactions known.

10.4. Conditions to avoid

Heat

Water/ moisture

Avoid generation of dust.

10.5. Incompatible materials

Acids

Bases

Oxidizing agents

Magnesium

10.6. Hazardous decomposition products

In case of fire, the following products can be released:

Nitrogen oxides (NO_x)

Phosphorus oxides (e.g. P₂O₅)

Ammonia

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Trade name: **AMMONIUM DIHYDROGENORTHOPHOSPHATE**

* **SECTION 11: Toxicological information**

11.1. Information on toxicological effects

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

LD/LC50 values:		
Oral	LD50	> 2000 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rat)

Primary irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):

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.

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

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

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

* **SECTION 12: Ecological information**

12.1. Toxicity

Aquatic toxicity:	
LC50	> 85.9 mg/l (Oncorhynchus mykiss) (96h)

12.2. Persistence and degradability

Methods for determination of degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential No indication of bio-accumulation potential.

12.4. Mobility in soil No further relevant information available.

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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Trade name: **AMMONIUM DIHYDROGENORTHOPHOSPHATE**

UN "Model Regulation": Void.

* **SECTION 15: Regulatory information**

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

EU-Regulations

Regulation (EC) No 1907/2006 (REACH)

Regulation (EC) No 1272/2008 (CLP)

National regulations:

Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

Employment restrictions concerning women of child-bearing age must be observed.

Other regulations, limitations and prohibitive regulations: National legislation has to be observed!

15.2. Chemical safety assessment A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Training hints:

The product should only be handled by persons, who were informed sufficiently about the nature of the product and about the necessary safety precautions.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative

* Data compared to the previous version altered.

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