Safety data sheet

ChemiPURE Potassium Dihydrogen Phosphate, ≥99%

Product name ChemiPURE Potassium Dihydrogen Phosphate, ≥99%	Catalog no. PDP05, PDP10
Synonyms Potassium phosphate monobasic	SDS revision -
CAS no. 7778-77-0	Format version / date 3 / 25 October 2026

01 PRODUCT AND COMPANY IDENTIFICATION

Product identifier	ChemiPURE Potassium Dihydrogen Phosphate, ≥99%
Product code	PDP05, PDP10
CAS number	7778-77-0
EC number	231-913-4
Recommended use	For research use only. Laboratory reagent for phosphate buffer/PBS preparation, analytical and biochemical applications.
Supplier	EcoTech Biotechnology
Website	www.ecotechbiotech.com
Address	Universite Mah. İpekyolu Cad. Ata Teknokent Sitesi B Blok No: Z10, Yakutiye, Erzurum, Türkiye
Telephone	0090 544 327 34 97
SDS contact	info@ecotechbiotech.com
Emergency telephone	0090 544 327 34 97
Available	Monday-Saturday/08:00-20:00/GMT+3
Languages	Turkish/English
Outside these hours	Contact: info@ecotechbiotech.com

02 HAZARDS IDENTIFICATION

Classification	Not classified as hazardous under Regulation (EC) No. 1272/2008 (CLP).
Label elements	No hazardous label elements required.
Symbols / pictograms	None
Signal word	None
Hazard statements	None
Precautionary statements - Prevention	Avoid generating or breathing dust. Use safety glasses and suitable laboratory gloves; wash hands after handling.
Precautionary statements - Response	Rinse exposed skin and eyes with water. Seek medical advice if symptoms persist.
Other hazards	Dust may cause temporary mechanical irritation of eyes, skin or respiratory tract; avoid excessive exposure.

Composition & response

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03 COMPOSITION / INFORMATION ON INGREDIENTS

Product name	ChemiPURE Potassium Dihydrogen Phosphate, ≥99%
Synonyms	Potassium phosphate monobasic; monopotassium phosphate; potassium biphosphate
Concentration	≥99% (purity)
Formula	KH_2PO_4
Molecular weight	136.09 g/mol
Mixture statement	Substance: potassium dihydrogen phosphate (CAS 7778-77-0; EC 231-913-4), purity ≥99%. No CLP-classified hazardous ingredient identified at the stated grade. Product-specific trace impurities are not disclosed.

04 FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses if easily possible. Consult a physician if symptoms persist.
Skin contact	Remove contaminated clothing and rinse skin with plenty of water. Seek medical advice if irritation persists.
Inhalation	Move to fresh air. Seek medical advice if cough or respiratory discomfort persists.
Ingestion	Rinse mouth. Give water to drink only if fully conscious. Do not induce vomiting. Seek medical advice if unwell.
Self-protection of first aider	Use suitable personal protective equipment and avoid inhaling dust.
Most important symptoms / effects	Dust may cause coughing or irritation of eyes and skin. Large ingestion may cause gastrointestinal discomfort.
Notes to physicians	Treat symptomatically.

05 FIREFIGHTING MEASURES

Suitable extinguishing media	Use extinguishing media appropriate for the surrounding fire (water spray, foam, carbon dioxide or dry powder).
Unsuitable extinguishing media	No specific restrictions identified for this substance.
Special hazards arising from the substance or mixture	Not combustible. Heating or surrounding fire may liberate irritating fumes including phosphorus oxides and potassium oxides.
Explosion data	Not explosive; no specific mechanical impact or static-discharge sensitivity identified.
Advice for firefighters	Use self-contained breathing apparatus and suitable protective clothing. Prevent contaminated runoff entering surface water.

Safe use & protection

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06 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Avoid raising or inhaling dust. Provide ventilation and wear gloves, eye protection and protective clothing.
Environmental precautions	Avoid significant release to drains or waterways.
Methods and materials for containment and cleaning up	Collect dry material mechanically without generating dust. Place in properly labelled, sealed containers for disposal; clean spill area.
Reference to other sections	See Sections 8 and 13.

07 HANDLING AND STORAGE

Precautions for safe handling	Avoid dust formation and contact with eyes. Use normal laboratory hygiene; wash hands after use.
Conditions for safe storage	Store at 15–25 °C in a tightly closed, dry container. Protect from moisture and strong heating.
Container labeling	Store in correctly labelled containers; keep the original identification label intact.

08 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

No substance-specific occupational exposure limit values have been established for potassium dihydrogen phosphate.

8.2 Exposure controls

Engineering measures	Provide sufficient general ventilation; use local exhaust if dust is generated.
Hygiene measures	Do not eat, drink or smoke in work areas. Wash hands and change contaminated clothing after handling.
Eye / face protection	Use appropriate safety glasses or goggles compliant with EN 166.
Hand protection	Wear suitable chemical-resistant gloves, such as nitrile; inspect before use.
Skin and body protection	Wear a laboratory coat and protective work clothing.
Respiratory protection	Normally unnecessary in well-ventilated areas; use a suitable particulate filter (P1 or equivalent) when dust is generated.

Material properties

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09 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White crystalline powder or crystals (solid)
Odor	Odorless
Odor threshold	Not applicable (odorless)
pH	Approx. 4.2–4.6 (20 g/L in water at 20 °C)
Melting point / freezing point	Approx. 252.6 °C
Initial boiling point and boiling range	Approx. 450 °C (1,013 hPa; literature value)
Flash point	Not applicable (non-combustible inorganic solid)
Evaporation rate	Not applicable (solid)
Flammability (solid, gas)	Not flammable; non-combustible
Upper / lower flammability or explosive limits	Not applicable
Vapor pressure	<0.1 hPa at 25 °C
Vapor density	No data available
Relative density	Approx. 2.34 g/cm³
Solubility(ies)	Water: approx. 208 g/L at 20 °C
Partition coefficient: n-octanol / water	Not applicable for an inorganic salt
Auto-ignition temperature	Not applicable (non-combustible)
Decomposition temperature	No data available
Viscosity	Not applicable (solid)
Explosive properties	Not classified as explosive
Oxidizing properties	Not classified as oxidizing

10 STABILITY AND REACTIVITY

Reactivity	No hazardous reaction expected under normal laboratory handling conditions.
Chemical stability	Chemically stable under normal ambient conditions and recommended dry storage.
Possibility of hazardous reactions	May react with strong oxidizing agents, strong acids or bases under unsuitable conditions.
Conditions to avoid	Strong heating, moisture and dust generation.
Incompatible materials	Strong oxidizers; strong acids and bases.
Hazardous decomposition products	Under fire or thermal decomposition: phosphorus oxides and potassium oxides.

Health & environment

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11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Not classified as acutely toxic under CLP; oral LD50 (rat) >2,000 mg/kg (analogue data).
Skin corrosion / irritation	Not classified; reported test data do not indicate skin irritation.
Serious eye damage / eye irritation	Not classified; dust may nevertheless cause transient mechanical irritation.
Carcinogenicity	No classification as a carcinogen; no substance-specific evidence available for classification.
Reproductive toxicity	No classification; substance-specific reproductive-toxicity data are limited.
STOT - SE	Not classified. Dust inhalation may cause temporary respiratory discomfort.
STOT - RE	Not classified based on available information.
Aspiration hazard	Not applicable to a crystalline solid.

11.2 Potential health effects

Ingestion: Large amounts may cause nausea, vomiting or abdominal discomfort.
Inhalation: Dust may cause cough or respiratory irritation.
Skin: Dust may cause temporary irritation.
Eyes: Dust may cause redness or discomfort.

11.3 Additional information

No further product-specific toxicological information is available.

12 ECOLOGICAL INFORMATION

Ecotoxicity	No comprehensive aquatic-toxicity dataset available; avoid unnecessary environmental discharge.
Persistence and degradability	Inorganic salt; biodegradation assessment is not applicable.
Bioaccumulative potential	No data available; significant bioaccumulation is not expected for a dissociating inorganic salt.
Mobility in soil	Water-soluble substance; may migrate with water.
Results of PBT and vPvB assessment	Not assessed for the supplied grade; PBT/vPvB criteria are not generally applicable to inorganic substances.

13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose of unused chemical via an approved laboratory waste route in accordance with applicable local and national regulations. Do not discharge bulk quantities to drains.
Contaminated packaging	Dispose of in accordance with local requirements; do not reuse uncleaned packaging.

Transport & reference

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14 TRANSPORT INFORMATION

Mode	UN no.	UN proper shipping name	Hazard class	Packing group	Environmental hazards
ADR/RID	-	Not regulated	-	-	No
IMDG	-	Not regulated	-	-	No
IATA	-	Not regulated	-	-	No

15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation	Regulation (EC) No. 1907/2006 (REACH) and Regulation (EC) No. 1272/2008 (CLP). Substance: potassium dihydrogen phosphate (CAS 7778-77-0; EC 231-913-4). No hazardous CLP labelling required.
Environmental hazards	Not classified as hazardous to the aquatic environment under CLP.
Chemical safety assessment	No product-specific chemical safety assessment supplied.

16 OTHER INFORMATION

Key to abbreviations and acronyms

STOT-SE	Specific Target Organ Toxicity - Single Exposure
STOT-RE	Specific Target Organ Toxicity - Repeated Exposure
PBT	Persistent Bioaccumulative and Toxic
vPvB	very Persistent very Bioaccumulative and toxic
ADR	European Agreement concerning the international carriage of Dangerous goods by Road
CAS	Chemical Abstracts Service
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime code for Dangerous Goods
REACH	Registration, Evaluation, Authorization and restriction of Chemicals
RID	Regulations concerning the International transport of Dangerous goods by rail