

Product Name	Potassium dihydrogen phosphate
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:

Product Description: Potassium dihydrogen phosphate

Synonyms: Potassium phosphate, monobasic

CAS-No: 7778-77-0

EC-No.: 231-913-4

Molecular Formula: $\text{H}_2\text{KO}_4\text{P}$

REACH Registration No: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration, or the registration is envisaged for a later registration deadline.

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

Recommended Use: Laboratory chemicals, Manufacture of substances, Used as an excipient and a biopharma ingredient

1.3. Details of the supplier of the safety data sheet:

- Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad-382110, Gujarat, India.
Web: www.finarchemicals.com
- E-Mail Address** safety.finar@actylis.com; info.finar@actylis.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2. Label Elements:

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3. Other Hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Potassium dihydrogen phosphate

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Potassium dihydrogen phosphate	7778-77-0	231-913-4	> 98

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

- **If inhaled**

Remove to fresh air. Get medical attention immediately if symptoms occur.

- **If Contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

- **In case of eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Get medical attention.

- **If swallowed**

Clean mouth with water and drink afterwards plenty of water. Get medical attention if

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symptoms occur.

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

Irritant effects, gastric pain, Diarrhoea, Nausea, Vomiting, Discomfort

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

No Data Available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media- Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media- For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture:

Not Combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of: Oxides of phosphorus.

5.3. Advice for firefighters:

Special protective equipment for firefighters:

In the event of fire, wear self-contained breathing apparatus.

5.4 Further Information:

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

6.2. Environmental precautions:

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to other sections:

For disposal see Sections 13.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

7.2. Conditions for safe storage, including any incompatibilities:

Keep containers tightly closed in a dry and well-ventilated place.

Protect from moisture.

7.3. Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Contains no substances with occupational exposure limit values.

8.2. Exposure Controls:

Appropriate Engineering Controls:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See section 7.1.

Personal Protective Equipment:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye & Face Protection-

Safety glasses

Hand Protection

Full contact:

Glove Material: Nitrile Rubber

Glove Thickness: 0.11 mm

Break Through Time: >480 min

Splash contact:

Glove Material: Nitrile Rubber

Glove Thickness: 0.11 mm

Break Through Time: >480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the

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related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

Required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances.

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental Exposure Controls

Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** White
- **Physical State:** Solid
- **Odor:** Odorless
- **Odor Threshold:** No data available
- **pH:** 4.4-4.7 at 20°C 5% aq. Sol
- **Melting Point:** 253 °C
- **Critical Temperature:** No data available
- **Vapor Pressure:** No data available
- **Relative Density:** 2.338 g/mL at 25 °C
- **Density:** No data available
- **Auto-Ignition Temperature:** Not combustible
- **Decomposition Temperature:** > 250°C

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- **Volatility:** No data available
- **Bulk Density:** ca.1,200 kg/m³
- **Viscosity, dynamic:** No data available
- **Viscosity, Kinematic:** No data available
- **Water/Oil Dist. Co eff.:** No data available
- **Partition Co-efficient: n-octanol/Water:** No data available
- **Ionicity (in Water):** No data available
- **Lower Explosion Limit:** No data available
- **Upper Explosion Limit:** No data available
- **Boiling Point/Range:** No data available
- **Specific Gravity:** No data available
- **Flash Point:** Does not flash
- **Water Solubility:** 208 g/l at 20 °C

9.2. Other information:

Molecular Formula: H₂KO₄P

Molecular Weight: 136.09 g/mol

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

No data available

10.2. Chemical stability:

Stable under normal conditions.

10.3. Possibility of hazardous reactions:

Violent reactions possible with: Strong oxidizing agents, Bases, Acids

10.4. Conditions to avoid:

Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water.
Strong heating (decomposition).

10.5. Incompatible materials:

Strong oxidizing agents, Strong bases, Strong acids

10.6. Hazardous decomposition products:

Oxides of phosphorus, Phosphorus trihydride (phosphine)

SECTION 11: TOXICOLOGICAL INFORMATION

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11.1 Information on toxicological effects:

Acute Oral toxicity

LD50 Rat: > 2,000 mg/kg

OECD Test Guideline 420)

The value is given in analogy to the following substances: dipotassium hydrogen phosphate

Symptoms: Nausea, Vomiting, gastric pain, Diarrhoea, Discomfort

Acute inhalation toxicity

No data available

Acute dermal toxicity

LD50 Rabbit: > 4,640 mg/kg

(RTECS)

Skin irritation

Skin - Rabbit

Result: No skin irritation

Draize Test

(ECHA)

Eye irritation

Eyes - Rabbit

Result: No eye irritation

Draize Test

(ECHA)

Sensitisation

Sensitisation test: Mouse

Result: negative

Method: OECD Test Guideline 429

The value is given in analogy to the following substances: sodium dihydrogen phosphate

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Teratogenicity

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No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further Information:

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Inhalation of the dusts should be avoided as even inert dusts may impair respiratory organ functions.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to fish

LC0 Leuciscus idus (Golden orfe): ca. 900 mg/l; 48 h

(IUCLID)

Toxicity to daphnia and other aquatic invertebrates

No data available

Toxicity to algae

No data available

Toxicity to bacteria

Static test EC50 activated sludge: > 1,000 mg/l; 3 h

OECD Test Guideline 209

The value is given in analogy to the following substances: dipotassium hydrogen phosphate

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulate potential:

No data available

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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12.6 Other adverse effects:

Additional ecological information

Depending on the concentration, phosphates may contribute to the eutrophication of water supplies.

Discharge into the environment must be avoided.

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

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	Not classified as dangerous in the meaning of transport regulations.		
14.2 Proper shipping name	Not classified as dangerous in the meaning of transport regulations.		
14.3 Class	Not classified as dangerous in the meaning of transport regulations.		
14.4 Packing group	Not classified as dangerous in the meaning of transport regulations.		
14.5 Environmentally hazardous	Not classified as dangerous in the meaning of transport regulations.		
14.6 Special precautions for user	Not classified as dangerous in the meaning of transport regulations.		

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

National legislation

Storage class 10 - 13

15.2 Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

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SECTION 16: Other information

Training advice

Provide adequate information, instruction and training for operators.

References: Not available

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