Potassium dihydrogen phosphate,
JUNSEI CHEMICAL CO., LTD.,84185jis_E1-5,09/Mar/2026

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Safety Data Sheet

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

Product identifier:
Product name: Potassium dihydrogen phosphate
Reference number(SDS):84185jis_E1-5
Product type:
Reagent
Recommended use of the chemical and restrictions on use
Recommended uses: Research and Development
Restrictions on uses: Do not use for other purposes.
Details of the supplier of the safety data sheet
Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.
Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan
Division: Quality Assurance Department
Telephone number: +81-48-986-6161
FAX: +81-48-989-2787
e-mail address: shiyaku-t@junsei.co.jp

Section 2. Hazards identification

Classification of the substance or mixture
Not classified/Classification not possible
Label elements
Hazard pictogram: Not applicable
Signal word: Not applicable

Section 3. Composition/information on ingredients

Substance/mixture:
Substance
Common name, synonyms: Potassium phosphate monobasic
Ingredient name: Potassium dihydrogen phosphate
Content (%):(GR) 99.5<
(EP) 98.0 <
(pH std.soln.) 99.6<
Chemical formula:H2KO4P
ENCS:1-452
CAS No.:7778-77-0
MW:136.09
EC No.:231-913-4
Note : "GR", "EP", and "pH std. soln." refer to the reagent grades "Guaranteed Reagent", "Extra Pure", and "For pH Standard Solution", respectively.
The figures shown above are not the specifications of the product.

Section 4. First aid measures

Descriptions of first aid measures
IF INHALED
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF INHALED: Get medical help.

IF ON SKIN

IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

If skin irritation or rash occurs: Get medical help.

IF IN EYES

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical help.

IF SWALLOWED

Rinse mouth.

If victim is conscious, give 1 - 2 glasses of water.

IF SWALLOWED: Get medical help.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough. Abdominal pain. Vomiting. Diarrhoea. Nausea.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes. Pain of the eyes. Redness of the skin.

Indication of any immediate medical attention and special treatment needed

Information on indication of any immediate medical attention and special treatment needed is not available.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Special extinguishing method

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Reference to other sections

Refer to section 8

Refer to section 13

Section 7. Handling and storage

Engineering measures

(Measures to prevent operator exposure)

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

(Measures to prevent fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Local ventilation/general ventilation)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.

Avoid contact with eyes.

Advice on safe handling

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Avoidance of contact

See Section 10: Stability and Reactivity.

Advice on general occupational hygiene

Do not get in eyes, on skin, or on clothing.

Do not eat, drink or smoke when using this product.

Conditions for safe storage

Keep container tightly closed.

Keep cool.

Store in accordance with local/regional/national/international regulations regulation.

Protect from sunlight. Store in a well-ventilated place.

Incompatible substances

Refer to Section 10. Stability and reactivity.

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

Section 8. Exposure controls/personal protection

Permissible concentration

Control value and Concentration standard value under ISHA

Not established

Occupational exposure limit values

JSOH

Not established

ACGIH

Not established

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures, such as personal protective equipment

Respiratory protection

Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).

Recommended respiratory protection : Dust mask

Hand protection

Wear protective gloves.

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

Eye/face protection

Wear safety glasses with side-shields.

Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals or crystalline powder

Color: Colorless or white

Odor: Odorless

Odor threshold data is not available.

Melting point/Freezing point: 253℃

Boiling point, initial boiling point, or boiling range data is not available.

Flammability: Non-flammable

Lower and upper explosion limit data is not available.

Flash point: Non-flammable

Auto-ignition temperature data is not available.

Decomposition temperature: ca. 253℃

pH: ca. 4.2～4.6 (20g/L, 20℃)

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 22 g/100 mL

Solubility in solvent: Slightly soluble in ethanol (99.5).

Partition coefficient n-octanol/water data is not available.

Vapor pressure data is not available.

Density and/or relative density: 2.34g/cm3(20℃)

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

Section 10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Decomposes on heating. This produces toxic gases.

This product's aqueous solution is a weak acid.

Conditions to avoid

Avoid direct sunlight, fire, flame, high temperature.
Contact with incompatible materials.
Moisture.

Incompatible materials

Strong bases, Strong oxidizing agents

Hazardous decomposition products

Sodium oxides, Phosphorus oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Serious eye damage/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Respiratory or skin sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Specific target organ toxicity - single exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Specific target organ toxicity - repeated exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Section 12. Ecological Information

Ecotoxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Waste treatment methods

Waste from residues

Disposal should be in accordance with local, national, and international laws and regulations.

Comply with relevant laws and regulations as well as local municipal standards.

Do not dump into sewers, on the ground or into any body of water.

Contaminated packing

Disposal should be in accordance with local, national, and international laws and regulations.

Comply with relevant laws and regulations as well as local municipal standards.

Dispose of container after using the contents completely.

Section 14. Transport Information

UNRTDG

UN number : Not regulated
UN Proper Shipping Name : Not regulated
Transport hazard class(es) : Not regulated
Packing group : Not regulated

IMDG Code (International Maritime Dangerous Goods Regulations)

UN number : Not regulated
UN Proper Shipping Name : Not regulated
Transport hazard class(es) : Not regulated
Packing group : Not regulated

IATA (Dangerous Goods Regulations)

UN number : Not regulated
UN Proper Shipping Name : Not regulated
Transport hazard class(es) : Not regulated
Packing group : Not regulated

Environmental hazards

Marine pollutants (yes/no) : no
Environmentally hazardous substance/mixture (yes/no) : no

Special precautions for user

No information available.

Maritime transport in bulk according to IMO instruments

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code

Section 15. Regulatory Information

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

7778-77-0

All components are listed or exempted.

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.
Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.
Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

Section 16. Other information

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN
IMDG Code, 2024 Edition (Incorporating Amendment 42-24)
IATA Dangerous Goods Regulations (67th Edition) 2026
2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2026 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2025
JIS Z 7253 : 2025
Recommendation of occupational exposure limits (2024-2025) (JSOH)
Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, MHLW in Japan
Supplier's data/information
Chemicals safety data management system "GHS Assistant" Version 4.38 (https://www.asahi-ghs.com/)
NITE Chemical Risk Information Platform "NITE-CHRIP" (https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/systemTop)
GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May. 2024, METI)

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists;
anh - anhydride;
ATE - Acute Toxicity Estimate;
BCF - Bioconcentration Factor;
BOD - Biochemical Oxygen Demand;
Cat. - Category;
Ceiling-C - Ceiling value;
COD - Chemical Oxygen Demand;
CSCL - Chemical Substances Control Law in Japan;
DSEN - Dermal Sensitization;
EC No. - The European Community number;
EC50 - Effective Concentration 50;
ENCS - Existing and New Chemical Substances Inventory under CSCL
EPA - US Environmental Protection Agency;
EU - European Union;
GHS - Globally Harmonized System of Classification and Labelling of Chemicals;
IARC - International Agency for Research on Cancer;
IATA - International Air Transport Association;
IBC Code - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;
IMDG Code - International Maritime Dangerous Goods Code;
ISHA - Industrial Safety and Health Act in Japan;
JSOH - Japan Society for Occupational Health;
LC50 - Lethal Concentration 50;
LD50 - Lethal Dose 50;
logPow - n-Octanol/water Partition Coefficient;
MARPOL - International Convention for the Prevention of Pollution from Ships;
METI - Ministry of Economy, Trade and Industry in Japan;
MHLW - Ministry of Health, Labour and Welfare in Japan;
MOE - Ministry of the Environment in Japan
NOEC - No Observed Effect Concentration;
NTP - US National Toxicology Program;
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No.1907/2006;
RSEN - Respiratory Sensitization;
Skin - Danger of cutaneous absorption;
STEL - Short-term Exposure Limit;
STOT - Specific target organ toxicity;
SVHC - Substance of Very High Concern under REACH;
TWA - time-weighted average;
UN - United Nations;
UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods;

General Disclaimer

The information relates to this specific material. It may not be valid for this material, if used in combination with any other materials or in any process. It is the user's responsibility to satisfy him-selves as to the suitability and completeness of this information for his own particular use.

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2024).

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