



Material Safety Data Sheet
acc. to OSHA and ANSI

Printing date 11/06/2012

2-800-26-014-US version 6

Reviewed on 11/06/2012

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

• **Product identifier**

• **Trade name:** **PeKacid 0-60-20**

• **Synonyms**

Potassium pentahydrogen bis(phosphate)
Phosphoric acid, potassium salt (2:1)
Hemi Potassium Phosphate

• **Article number:** 9745352219, 9745352119

• **CAS Number:**

14887-42-4

• **EC number:**

238-961-5

• **Application of the substance / the mixture**

Fertilizer

pH-corrective agent

• **Manufacturer/Supplier:**

Manufacturer:

Rotem Amfert Negev Ltd.

ICl Specialty Fertilizers

Shalit House

Shezar 3 St.

P.O.Box 125

Beer-Sheva, 84100

ISRAEL

Tel: + 972-8-6598877

Fax: + 972-8-6598987

E-mail: iclsf@iclfertilizers.com

Supplier:

ICL Premium Fertilizers NA

622 Emerson Rd

Suite 500

St. Louis, MO 63141,

USA

Tel: 1-877-ROTEM-US

Fax: (314)983-7611

E-mail: ariana@icl-ip.com

• **Emergency telephone number:** CHEMTREC : 1-800-424-9300 (24-hour emergency phone number)

2 Hazards identification

• **Classification of the substance or mixture:** **Eye Irritant, Category 2B**

H320 Causes eye irritation.

• **GHS label elements**

The substance is classified and labelled according to the Globally Harmonized System (GHS).

• **Hazard pictograms** Void

• **Signal word** Warning

• **Hazard statements**

H320 Causes eye irritation.

• **Precautionary statements**

P280

Wear protective gloves and eye protection.

P264

Wash hands thoroughly after handling.

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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.

Additional information:

□ Emergency Overview

Appearance/Odor: White crystalline powder, odorless.

Warning.

Causes eye irritation.

Water solutions of this substance may be corrosive to metals.

□ OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

□ Potential health effects

Relevant routes of exposure: skin contact, eye contact, inhalation.

Eye: Causes serious eye irritation.

Skin: Solid product not expected to cause skin irritation. Water solutions of this product may cause irritation.

Inhalation: Solid product not expected to cause respiratory tract irritation. Water solutions of this product may cause irritation.

Environmental effects: Not harmful.

Hazard description:**WHMIS-symbols:**

D2B - Toxic material causing other toxic effects

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 1

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 1

Fire = 0

Reactivity = 0

Other hazards**Results of PBT and vPvB assessment**• **PBT:** Not applicable.• **vPvB:** Not applicable.**3 Composition/information on ingredients****Chemical characterization: Substances****CAS No. Description**

14887-42-4 Potassium pentahydrogen bis(phosphate)

Identification number(s)• **EC number:** 238-961-5

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· SVHC None

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4 First aid measures· **General information:**

Do not leave affected persons unattended.
Immediately remove any clothing soiled by the product.

· **After inhalation:**

Take affected persons into fresh air and keep quiet.
Supply fresh air.
Seek medical treatment in case of complaints.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.
NOTE: Never give an unconscious person anything to drink.
Do not induce vomiting.
If symptoms persist consult doctor.

· **Most important symptoms and effects, both acute and delayed** Irritating to eyes.· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures· **Suitable extinguishing agents:**

The product is not flammable.
Use fire fighting measures that suit the environment.
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet· **Special hazards arising from the substance or mixture**

In case of fire, the following can be released:
Phosphorus oxides (e.g. P₂O₅)

· **Protective equipment:**

Wear fully protective suit.
Mouth respiratory protective device.

· **Additional information**

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

6 Accidental release measures· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of dust.
Avoid formation of dust.

· **Environmental precautions:**

Dilute with plenty of water.
Do not allow product to reach sewage system or any water course.

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- **Methods and material for containment and cleaning up:**
Pick up mechanically.
Use neutralizing agent.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:**
The product is not flammable.
No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Use polyolefine receptacles.
Suitable material for receptacles and pipes: Stainless steel.
Use polyolefine lining in receptacles.
Provide acid-resistant floor.
Store only in the original receptacle.
- **Information about storage in one common storage facility:**
Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from humidity and water.
This product is hygroscopic.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:**
Ventilation must be sufficient to maintain TLV-TWA below 3 mg/m³, respirable particles, and 10 mg/m³, inhalable particles [ACGIH recommendation for Particles (Insoluble or poorly soluble). Not Otherwise Specified (PNOS)]
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
Use suitable respiratory protective device in case of insufficient ventilation.
Filter P2

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· Protection of hands:



Protective gloves

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

· Material of gloves

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Natural rubber, NR

Chloroprene rubber, CR

Neoprene 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:



Tightly sealed goggles

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment

Based on all data available this product is not considered to pose a risk to the environment.

The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.

9 Physical and chemical properties

· Appearance:

Form:

Crystalline powder

Color:

White

· Odor:

Odorless

· pH-value (10 g/l) at 20°C (68 °F):

2.2

· Change in condition

Melting point/Melting range:

127-135°C (261-275 °F) (OECD 102, EPA)

Boiling point/Boiling range:

None

The substance decomposes before boiling

· Flash point:

Not applicable.

This product is inorganic substance.

· Flammability (solid, gaseous):

Product is not flammable.

· Ignition temperature:

Not applicable

· Decomposition temperature:

>200°C (>392 °F)

· Auto igniting:

Product is not selfigniting.

· Danger of explosion:

Product does not present an explosion hazard.
(based on molecular structure)

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- **Explosion limits:** None
- **Oxidizing properties:** None
(according to EC A.17)
- **Vapor pressure at 20°C (68 °F):** 1.47x10⁻⁵ hPa (1.1x10⁻⁵ mm Hg) (OECD 104, EC A.4)
- **Density at 20°C (68 °F):**
- **Bulk density at 20°C (68 °F):** 1.4-2.0 g/cm³ (11.683-16.69 lbs/gal)
- **Evaporation rate:** Not applicable
This product is an inorganic solid
- **Solubility in / Miscibility with Water at 20°C (68 °F):** 583 g/l (OECD 105)
- **Segregation coefficient (n-octanol/water):** Not applicable
This substance is inorganic chemical.
- **Viscosity:** Not applicable
This product is solid. Viscosity is only relevant to liquids.
- **Other information:** No further relevant information available.

10 Stability and reactivity

- **Reactivity:**
Reacts with alkali (lyes).
Water solutions of this product may be corrosive to metals.
- **Chemical stability:**
No decomposition if used according to specifications.
Thermal decomposition on losing water.
- **Possibility of hazardous reactions:** Reacts with metals in the presence of moisture to form hydrogen.
- **Conditions to avoid:** To avoid thermal decomposition do not overheat.
- **Incompatible materials:**
Water
Metals
Alkalis
- **Hazardous decomposition products:** Phosphorus oxides (e.g. P₂O₅)
- **Additional information:** This product is hygroscopic.

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
no classification is necessary

Oral	LD50	>2000 mg/kg (rat) (OECD 425)
Dermal	LD50	>2000 mg/kg (rat) (OECD 402)

- **Primary irritant effect:**

Effect Species Method		
Irritation of skin	OECD 404	none (rabbit)
Irritation of eyes	OECD 405	mild irritant, category 2B (rabbit)

7558-80-7 sodium dihydrogenorthophosphate

Sensitization	OECD 429, EC B.42	No sensitizing effects known. (mouse)
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• Subacute to chronic toxicity:

No reliable study with this product is present.

This study is conducted on an analogous substance (read-across) :

7785-88-8 Sodium aluminum phosphate

Repeated dose : Oral NOAEL >323 mg/kg bw/day (dog) (90 days, subchronic)

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

None

Sodium and potassium phosphates are routinely used in the nutrient broths that support bacterial colonies in the laboratory and as such bacteria are constantly exposed to these inorganic phosphates. The constant exposure of bacteria to these materials suggests that they pose no inherent risk of genotoxicity.

• Carcinogenicity:

no data available

(no carcinogenicity study needs to be performed as this substance is not genotoxic)

• Toxicity for reproduction:

no classification is necessary

No reliable study with this product is present.

This study is conducted on an analogous substances (read-across):

7758-11-4 dipotassium hydrogenorthophosphate :

developmental toxicity: NOAEL > 1000 mg/kg bw/day; rat, oral (OECD 422)

7778-77-0 potassium dihydrogenorthophosphate :

developmental / maternal toxicity: NOAEL > 282 mg/kg bw/day; rat, oral

developmental / maternal toxicity: NOAEL > 320 mg/kg bw/day; mouse, oral

12 Ecological information**• Toxicity****• Aquatic toxicity:**

No reliable study with this product is present.

This study is conducted on an analogous substance. (read-across)

Inorganic phosphates are not considered to be toxic to aquatic species.

66922-99-4 Tripotassium trihydrogen diphosphate dihydrate

EC50/48 h (static) >100 mg/L (Daphnia magna) (OECD 202, freshwater.)

EC50/72 h (static) >100 mg/L (algae) (OECD 201, freshwater.)

NOEL: 100 mg/L

LC50/96 h (static) >100 mg/L (fish Oncorhynchus mykiss) (OECD 203, freshwater.)

• Persistence and degradability

The substance is inorganic; therefore no biodegradation tests are applicable.

This product dissociates into potassium and phosphate ions, which cannot be further degraded.

• Other information:

The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.

• Bioaccumulative potential

Does not accumulate in organisms

This product dissociates into potassium and phosphate ions, which are ubiquitous in the environment.

• Mobility in soil

This substance is highly water soluble and dissociating.

Low potential for adsorption (based on substance properties).

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Behavior in sewage processing plants:

Type of test	Effective concentration	Method	Assessment
7758-11-4	dipotassium hydrogenorthophosphate		
EC50/3 h	>1000 mg/L (activated sludge) (OECD 209, EPA)		
	NOEC (3 h): 1000 mg/L		

Remark:

No reliable study with this product is present.

This study is conducted on an analogous substance. (read-across)

Inorganic phosphates are not considered to be toxic to sewage treatment plant microorganisms.

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Results of PBT and vPvB assessment

- PBT:** No assessment is required for inorganic substances.

- vPvB:** No assessment is required for inorganic substances.

- Other adverse effects** No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:

This product is used as fertiliser. However, large spills can kill vegetation. Prevent large quantities from entering waterways. If uncontaminated, sweep up or collect, and reuse as product. If contaminated with other materials, collect in suitable containers.

Dilute concentrate with water and neutralize afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.

Disposal must be made in accordance with Local Authority requirements.

Uncleaned packagings:

Recommendation:

Packaging can be reused or recycled after cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

Disposal must be made according to official regulations.

- Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

UN-Number	None
DOT	None
UN proper shipping name	None
Transport hazard class(es)	None
Packing group	Not applicable
Environmental hazards:	None
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

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15 Regulatory information

- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenicity categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.
- **Canadian substance listings:**
- **Canadian Domestic Substances List (DSL)** Substance is listed.
- **GHS label elements**
- The substance is classified and labelled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** Void
- **Signal word** Warning
- **Hazard statements**
- H320 Causes eye irritation.
- **Precautionary statements**
- P280 Wear protective gloves and eye protection.
- P264 Wash hands thoroughly after handling.
- 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.
- **Registration status (Chemical Inventories listing) :**
- Europe (EINECS) : listed
- REACH Registration number: 01-2119510125-56-0001
- Australia (AICS) : listed
- Japan (ENCS) : listed
- Korea (KECI) : listed

16 Other information

- **Department issuing MSDS:** EHS UNIT in ISRAEL
- **Abbreviations and acronyms:**
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- NOAEL: No Observable Adverse Effect Level
- NOEC: No-Observed Effect Concentration
- OECD: Organisation for Economic Co-operation and Development



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· *** Data compared to the previous version altered.**

The sections where alterations took place are marked with an asterisk in the left border.

· **Disclaimer**

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