


<b>SAFETY DATA SHEET</b>	
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Complying with 1907/2006/EEC Regulation of 18 December 2006

**Section 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

**REACH Product name:** Tetrapotassium Pyrophosphate

**Trade names:** Tetrapotassium Pyrophosphate; TKPP, Hi-M-291, Hi-M-292

**Synonyms:** Tetrapotassium Diphosphate, Potassium Pyrophosphate, TKPP

**Chemical formula:**  $K_4P_2O_7$

**Fertilizer formula:** 0-43-57

**Product type:** Solid (powder)

**Cas number:** 7320-34-5

**Use of the substance/preparation:** Food processing - emulsifier, dispersant, sequestrant.

Cosmetics - toothpastes, soaps.

Industries – soap and detergents builder, ceramics, metal treatment, water treatment, paints.

Agriculture- fertilizer, component of liquid fertilizers.

**Company/undertaking identification**

**Supplier/Manufacturer:** Haifa Chemicals Ltd.

P.O.B 10809, Haifa Bay 26120, Israel

Tel: +972-4-8469961

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**E-mail address of person responsible for this SDS:** [industrial@haifachem.com](mailto:industrial@haifachem.com)

**Emergency telephone number:** +972-4-8469603/4


(with hours of operation)

**Section 2. HAZARDS IDENTIFICATION**

**Classification:** Xi: R36

**Physical/chemical hazards:** Irritating to eyes.

**See section 11 for more detailed information on health effects and symptoms.**

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### Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/preparation:**

Ingredient name	CAS number	%	EC number	Classification
Tetrapotassium Pyrophosphate	7320-34-5	100%	230-785-7	Xi: R36
<b>See section 16 for the full text of the R-phrases declared above</b>				

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in section 8.**

### Section 4. FIRST AID MEASURES

**Symptoms:** Causes irritation to the respiratory tract. Symptoms may include coughing and sneezing. Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Causes irritation to skin and eyes. Symptoms include dryness or cracking.


**Eyes contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation develops or persists or if visual changes occur.

**Skin contact:** In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Cold water may be used. Get medical attention if irritation develops or persists. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

**Inhalation:** If respiratory irritation or distress occurs, remove victim to fresh air. Get medical attention if respiratory irritation or distress continues.

**Ingestion:** If victim conscious and alert, give 2-3 glasses of water to drink DO NOT INDUCE VOMITING. Do not give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

**Protection of first-aiders:** No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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**Notes to physician:** No specific antidote, medical staff contacts Poisons Information Center. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**See section 11 for more detailed information on health effects and symptoms.**

### Section 5: Fire-Fighting Measures

**Extinguishing media**

**Suitable:** Use water spray, dry chemical, carbon dioxide or appropriate foam.

**Not suitable:** N/A

**Special exposure hazards:** Non-combustible.

**Hazardous thermal decomposition products:** Oxides of potassium and oxides of phosphorous.

**Special protective equipment for fire fighters:** Fire Fighting should wear positive self-contained breathing apparatus (SCBA) and full turnout gear.

**Remark:** Move containers from fire area if possible to do so without risk.

### Section 6: Accidental Release Measures

**Personal precautions:** Wear protective clothing. Ventilate area of spill.

**Environmental precautions:** Do not let this chemical enter the environment.

**Methods for cleaning up**

**Small spill:** Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

**Large spill:** As for small spill


**Personal Protection in Case of Large Spill:** Safety glasses. Full suit. Dust respirator. Boots. Gloves. A self- contained breathing apparatus should be used to avoid inhalation of the product.

### Section 7: Handling and Storage

**Handling:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection.

**Storage:** Keep containers tightly closed, in a dry, cool and well ventilated place. Protect from humidity.

Do not store together with strong acids, strong oxidizing agents and aluminum.

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**Specific use(s):**

**Section 8: Exposure Control / Personal Protection**

**Exposure limit values:** ACGIH-TLV 10 mg/m<sup>3</sup> (TWA) \*  
 ACGIH-TLV 3 mg/m<sup>3</sup> (TWA) \*\*  
 OSHA-PEL 15 mg/m<sup>3</sup> (TWA) \*\*\*  
 OSHA-PEL 5 mg/m<sup>3</sup> TWA) \*\*  
 \* nuisance dust - inhalable particulate  
 \*\* nuisance dust - respirable particulate  
 \*\*\* total dust

**Exposure controls**

**Occupational exposure controls:** Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Respiratory protection:** Dust respirator. Be sure to use an approved/certified or equivalent. Wear appropriate respirator when ventilation is inadequate.

**Hand protection:** Wear protective gloves to prevent skin exposure.

**Eye protection:** Wear protective safety glasses.

**Skin protection:** Wear appropriate long-sleeved clothing to minimize skin contact.

**Hygiene measures:** Keep away from foodstuffs and beverages. Do not eat, drink or smoke during work time. Remove soiled or soaked clothing immediately. Clean skin thoroughly after work; apply skin cream. During use, provide suitable ventilation.

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Exposure Guidelines:** Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements.

**Section 9: Physical and Chemical Properties**

**General information:**

Physical state: Solid (hygroscopic powder)

Colour: White

Odour: Odourless

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Odour threshold: Odourless

Molecular weight: 330.34 g/mol

pH: 10.0-10.8 (Conc.(%w/w): 1) [Basic]

Boiling point/boiling range: Not applicable

Flash point: Not applicable

Flammability: Not flammable

Explosive properties: Not explosive

Oxidizing properties: Not oxidizer

Vapor pressure: <0.001 kPa (<0.01 mm Hg) at 20°C (68°F)- Not Volatile

Relative Density: >2 g/cm<sup>3</sup> (exact value isn't found)

Water solubility: 186 g/100g of water at 20°C (68°F)

Octanol/Water partition coefficient: <1, the product is more soluble in water

Viscosity: Not viscous

Vapor density: Not volatile

Evaporation rate (butyl acetate=1): Not volatile

VOC: Not an organic compounds

Apparent (Bulk) Density: 0.8-1.1 g/cm<sup>3</sup>

Decomposition range: >1100°C (2012°F)

Melting point/melting range: >1100°C (2012°F)

### Section 10: Stability and Reactivity

**Stability:** The product is stable under normal handling and storage conditions described in Section 7.

**Conditions to avoid:** Extreme humidity. Wet product could be corrosive to aluminum.

**Materials to avoid:** Strong oxidizing agents, strong acids, aluminum and moisture.

**Hazardous Decomposition products:** Under fire- oxides of phosphorous, oxides of potassium.

**Hazard polymerization:** Will not occur.

### Section 11: Toxicological Information


#### Potential acute health effects

**Inhalation:** Dusts may cause coughing and sneezing.

**Ingestion:** Ingestion of large quantities may cause gastrointestinal irritation, vomiting and diarrhea.

**Skin contact:** Prolonged contact with the dry material may cause drying or crapping of the skin.

**Eyes contact:** Dusts have a dehydrating effect and may cause irritation at high concentration.

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**Acute toxicity:**

Product/ingredient name	Test/Type	Species	Dose	Exposure
Tetrapotassium pyrophosphate	LD50, oral	Rat	>4640 mg/kg	-

**Potential Chronic Health Effects**

**Reproductive toxicity:** Significant effects or critical hazards are not known.

**Carcinogenicity:** This product does not contain any substances that are considered by IARC, NTP, OSHA, EU or ACGIH to be “probable” or “suspected” human carcinogens.

**Mutagenicity:** Significant effects or critical hazards are not known.

**Teratogenicity:** Significant effects or critical hazards are not known.

**Developmental effects:**

**Fertility effects:** Not applicable.

**Over exposure signs/symptoms**

**Inhalation:** Inhalation of product may aggravate existing chronic respiratory disease.

**Ingestion:** No specific data

**Skin:** No specific data

**Eyes:** No specific data

**Target organs:** No specific data

**Special Remarks on Toxicity to animals:** Very low toxicity for humans or animals.

**Section 12: Ecological Information**

**Ecotoxicity**


**Aquatic ecotoxicity:** LC50 (Mysid Shrimp) 96-hr >100 mg/l  
LC50 (Rainbow trout) 96-hr > 100 mg/l

**Mobility:** Soluble in water.

**Persistence:** Not applicable, since inorganic substance.

**Degradability:** Not applicable.

**Degradability in sewage works:** Slow hydrolysis to orthophosphate form.

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**Bioaccumulative potential:** N/A

**Result of PBT assessment:** N/A

**Other adverse effects:**

**Substances which have an unfavorable influence on the oxygen balance and can be measured using parameters such as BOD, COD, etc.:** Absent.

**Substances, which contribute to eutrophication:** Phosphates, 43% as P<sub>2</sub>O<sub>5</sub>

**Remarks:** N/A

**Section 13: Disposal Considerations**

**Methods of disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Hazardous waste:** N/A

**Section 14: Transport Information**

**International transport regulations**

Regulatory Information	UN number	Proper shipping name	classes	Packing group	Label	Additional information	Marine pollutant
ADR/RID Class	NOT regulated	-	-	-	-	-	-
ADNR Class	NOT regulated	-	-	-	-	-	-
IMDG class	NOT regulated	-	-	-	-	-	-
IATA class	NOT regulated	-	-	-	-	-	-

**Section 15: Regulatory Information**

**EC regulations**

**Classification and labeling** have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

**Labelling in accordance with EC directive:** Xi- Irritating

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## Risk phrases:

R36 Irritating to eyes.

## Safety phrases:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

**Contains:** Tetrapotassium pyrophosphate 100%

**Product use:** Food processing - emulsifier, dispersant, sequestrant.

Cosmetics - toothpastes, soaps.

Industries - soap and detergents builder, ceramics, metal treatment, water treatment, paints.

Agriculture - fertilizer, component of liquid fertilizers.

## Section 16: Other Information

**Full text of R-phrases referred to in sections 2 and 3 :** R36/37/38 Irritating to eyes, respiratory system and skin.

**Full text of classifications referred to in sections 2 and 3:** Xi; Irritating.

**Training advice:** N/A

**Recommended restriction:** N/A

**Further information:**

**Sources of key data used to compile the Safety Data Sheet:**

National Fire Protection Association Hazard Ratings- NFPA (R):

- 2 Health Hazard Rating - Moderate
- 0 Flammability Rating - Minimal
- 0 Instability Rating - Minimal

National Paint & Coating Hazardous Materials Identification System – HMIS (R):

- 1 Health Hazard Rating - Slight
- 0 Flammability Rating - Minimal
- 0 Instability Rating - Minimal


Key Legend Information:

ACGIH- American Conference of Governmental Industrial Hygienists

OSHA- Occupational Safety and Health Administration

NTP- National Toxicology program



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IARC- International Agency for Research on Cancer

ND- Not Determined

N/A- Not available

R-phrases- Risk phrases

S-phrases- Safety phrases

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According to Regulation (EC) No. 1907/2006 (REACH), Annex II and Commission Directive 2001/59/EC.

To the best of our knowledge the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.