

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

1.1. Product Identifier

Product form	: Substance
Substance name	: Tetrapotassium Pyrophosphate
CAS No.	: 7320-34-5
Product code	: TKPPFGG, TKPPFGP, TKPPTGG, TKPPTGP
Formula	: $K_4O_7P_2$
Synonyms	: Potassium pyrophosphate / Diphosphoric acid, tetrapotassium salt / Tetrapotassium diphosphate / Tetrapotassium diphosphate / Diphosphoric acid, potassium salt (1:4) / TETRAPOTASSIUM PYROPHOSPHATE / Potassium pyrophosphate, tetrabasic / tetra-Potassium Pyrophosphate / Pyrophosphoric acid, tetrapotassium salt
Other means of identification	: None identified

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

Use of the substance/mixture	: Food grade Industrial use
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1.3. Details of the supplier of the safety data sheet

PCS Sales (USA), Inc.
1101 Skokie Blvd.
Suite 400
Northbrook, IL 60062
T 800-241-6908 / 847-849-4200

Suite 500
122 1st Avenue South
Saskatoon, Saskatchewan Canada S7K7G3
T 800-667-0403 (Canada) / 800-667-3930 (USA)

SDS@PotashCorp.com - www.PotashCorp.com

1.4. Emergency telephone number

Emergency number	: 800-424-9300 CHEMTREC
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Met. Corr. 1 H290
Skin Irrit. 2 H315
Eye Irrit. 2A H319

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2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H290 - May be corrosive to metals

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :

P234 - Keep only in original container

P264 - Wash hands thoroughly after handling

P280 - Wear eye protection, face protection, protective clothing, protective gloves

P302+P352 - IF ON SKIN: Wash with plenty of soap and water

P305+P351+P338 - If in eyes: Rinse cautiously with water for several

minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P332+P313 - If skin irritation occurs: Get medical advice/attention

P337+P313 - If eye irritation persists: Get medical advice/attention

P362 - Take off contaminated clothing

P390 - Absorb spillage to prevent material damage

P406 - Store in corrosive resistant container with a resistant inner liner

2.3. Other hazards

Hazardous to the aquatic environment

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Tetrapotassium Pyrophosphate

CAS No. : 7320-34-5

EC no : 230-785-7

EC index no :

Name	Product Identifier	%	GHS-US classification
Tetrapotassium pyrophosphate	(CAS No.) 7320-34-5	100	Met. Corr. 1, H290 Skin Irrit. 2, H315 Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation : If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists.
- First-aid measures after skin contact : Wash skin thoroughly with mild soap and water. Obtain medical attention if irritation develops or persists.
- First-aid measures after eye contact : Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Obtain medical attention if irritation develops or persists.
- First-aid measures after ingestion : Do not induce vomiting. Seek medical attention if a large amount is swallowed. Get medical advice and attention if you feel unwell.

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

- Symptoms/injuries : Causes skin and eye irritation.
- Symptoms/injuries after inhalation : Large amounts of dust will cause respiratory irritation and difficulty breathing.
- Symptoms/injuries after skin contact : Causes skin irritation, especially if allowed to remain in contact with moist skin.
- Symptoms/injuries after eye contact : Causes eye irritation.
- Symptoms/injuries after ingestion : If a large quantity has been ingested : Abdominal pain. Diarrhea. Nausea. Vomiting.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Not flammable. Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Under conditions of fire this material may produce: Potassium oxides. Phosphorus oxides.
- Explosion hazard : Product is not explosive.
- Reactivity : Stable at ambient temperature and under normal conditions of use. Material is hygroscopic.

5.3. Advice for firefighters

- Firefighting instructions : Keep upwind. Not flammable. Exercise caution when fighting any chemical fire.
- Protection during firefighting : Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).
- Other information : Do not allow run-off from fire fighting to enter drains or water courses.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not breathe fumes from fires or vapours from decomposition. Do not breathe dust.

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses, Gloves.

Emergency procedures : Collect as any solid. Avoid creating or spreading dust. Ventilate area.

6.1.2. For emergency responders

Protective equipment : Safety glasses, Gloves.

Emergency procedures : If possible, stop flow of product. Contain and collect as any solid. Avoid creating or spreading dust. Ventilate area.

6.2. Environmental precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300. In other countries call CHEMTREC at (International code) +1-703-527-3887.

6.3. Methods and material for containment and cleaning up

For containment : If contaminated with other materials, contain and collect as any solid in suitable containers. Do not allow into drains or water courses or dispose of where ground or surface waters may be affected. Prevent large quantities from contacting vegetation.

Methods for cleaning up : Recover the product by vacuuming, shoveling or sweeping and place in appropriate container to be disposed at an appropriate disposal facility according to current applicable laws and regulations and product characteristics at the time of disposal. Provide adequate ventilation. Avoid generation of dust during clean-up of spills. If uncontaminated, recover and reuse product.

Practice good housekeeping – spillage can be slippery on smooth surface either wet or dry.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety procedures. Do not breathe dust. Avoid contact with skin and eyes. Avoid creating or spreading dust. Do not eat, drink or smoke when using this product.

Hygiene measures : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store tightly closed in a dry, cool and well-ventilated place. Protect from moisture.

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Incompatible materials : Strong acids. Metals. Corrosive to: Aluminum.

7.3. Specific end use(s)

Industrial use. Food grade.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Tetrapotassium Pyrophosphate (7320-34-5) (Particulates Not Otherwise Regulated)		
USA OSHA	PEL (TWA)	15 mg/m ³ – particulate 5 mg/m ³ – respirable

8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation, especially in confined areas.

Personal protective equipment : Gloves. Safety glasses.



Hand protection : Impermeable protective gloves.

Eye protection : Safety glasses.

Skin and body protection : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

Respiratory protection : Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of dust are expected to exceed exposure limits.

Environmental exposure controls : Ensure adequate ventilation, especially in confined areas.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder; Granules
Colour	: White
Odour	: Odourless
Odour threshold	: No data available
pH	: 10 – 10.5
pH solution	: 1 %
Molecular weight	: 330
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 1090 °C (1994 °F) (dehydrates at approximately 300 °C)
Freezing point	: No data available
Boiling point	: 1500 °C (2732 °F)
Flash point	: No data available

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Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Bulk density	: 56 lbs/ft ³ at 20 °C (68 °F)
Density	: 0.94 g/cm ³
Solubility	: Water: 187 g/100ml at 25 °C (77 °F)
Log Pow	: No data available
Log Kow	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable at ambient temperature and under normal conditions of use. Material is hygroscopic.

10.2. Chemical stability

Stable at standard temperature and pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

Strong acid. Metals. Corrosive to: Aluminum.

10.6. Hazardous decomposition products

Under conditions of fire this material may produce: Potassium oxides. Phosphorus oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Tetrapotassium pyrophosphate (7320-34-5)	
LD50 dermal rabbit	> 4640 mg/kg

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation. pH: 10 – 10.5 (1% solution)
Respiratory or skin sensitisation	: Not classified

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity:	EPA Ecological Toxicity rating :	High
	Acute Toxicity to Fish:	No data available
	Chronic Toxicity to Fish:	96 hr LC ₅₀ > 100 mg/L; Rainbow trout
	Acute Toxicity to Aquatic Invertebrates:	No data available
	Toxicity to Aquatic Plants:	No data available
	Toxicity to Bacteria: (activated sludge):	No data available
	Toxicity to Soil Dwelling Organisms:	No data available
Environmental Fate:	Stability in Water:	No data available
	Stability in Soil:	No data available
	Transport and Distribution:	No data available
Toxicity:	Inorganic phosphates have the potential to increase the growth of freshwater algae, whose eventual death will reduce the available oxygen for aquatic life.	
Degradation Products:	Biodegradation:	No data available
	Photodegradation:	No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.
Waste disposal recommendations	: Place in an appropriate container and dispose of the contaminated material at a licensed site.
Additional information	: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: Transport information

In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

No dangerous good in sense of transport regulations.

14.2. UN proper shipping name

Not applicable

14.2 Additional information

Other information : No supplementary information available.

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Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Tetrapotassium Pyrophosphate (7320-34-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. US State regulations

The following states have an OSH program approved by OSHA. If you are located in any of these states you may be under state jurisdiction rather than federal jurisdiction and your state may have more stringent requirements than OSHA. You should consult your state regulations to ensure compliance.

Alaska	Indiana	Minnesota	North Carolina	Utah
Arizona	Iowa	Nevada	Oregon	Vermont
California	Kentucky	New Mexico	Puerto Rico	*Virgin Islands
*Connecticut	Maryland	*New Jersey	South Carolina	Virginia
Hawaii	Michigan	*New York	Tennessee	Washington
*Illinois				Wyoming

*The state plans in these states apply only to public sector employers. In these states private sector employers are subject to USOL – OSHA jurisdiction. All other state plans apply to both public and private sector employers.

Tetrapotassium pyrophosphate (7320-34-5)
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

15.3. Canadian regulations

Tetrapotassium pyrophosphate (7320-34-5)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

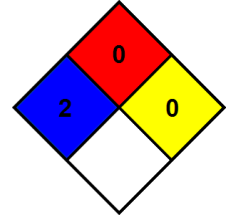
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SECTION 16: Other information

- NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA fire hazard : 0 - Materials that will not burn.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Full text of H-phrases:

Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Met. Corr. 1	Corrosive to metals Category 1
Skin Irrit. 2	skin corrosion/irritation Category 2
H290	May be corrosive to metals
H315	Causes skin irritation
H319	Causes serious eye irritation

Previous PotashCorp MSDS Number : MSDS 76 – Tetrapotassium Pyrophosphate

Updated Section: : 16 Other Information – NFPA Code moved down so completely visible

SDS US (GHS HazCom 2012)

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