From: BRENNTAG PACIFIC INC. To: AQUA SYSTEMS Tuesday, March 25, 2014



(Material) Safety Data Sheet

Tetrapotassium Pyrophosphate

Section 1 - Product and Company Identification

Material Name

· Tetrapotassium Pyrophosphate

CAS Number

• 7320-34-5

EINECS

230-785-7

Molecular Formula

K4P2O7

Molecular Weight

330.4

Product Description

White crystalline solid with no odor.

Synonyms

Pyrophosphoric Acid, Tetrapotassium Salt; Rhodia Phos TKPP; TKPP

Manufacturer

Innophos

PO Box 8000

259 Prospect Plains Road Cranbury, NJ 08512-8000

United States

Telephone

Technical

609-495-2495

Emergency

800-424-9300

Emergency

615-386-7816

Emergency

703-527-3887

Last Revision Date

Section 2 - Hazards Identification

Emergency Overview

WARNING

Causes skin irritation. Causes serious eye irritation. Harmful if swallowed.

Prevention

Do not eat, drink or smoke when using this product. Wash : thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye/face protection , .

Response

IF INHALED: Remove victim to fresh air and keep at rest in a postion comfortable for breathing. If skin irritation occurs: Get medical advice/attention. Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER or

doctor/physician if you feel unwell. Rinse mouth.

Storage/Disposal Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

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OSHA

WHMIS

Irritant

Class D - Poisonous and Infectious Materials - Division 2 - Subdivision B



EU

 Irritant - Xi R36/38



GHS

 Skin Corrosion/Irritation - Category 2, Serious Eye Damage, Eye Irritation - Category 2A, Acute Toxicity - Category 4

Route Of Entry Medical Conditions Aggravated by Exposure

- Inhalation, Skin, Eye, Ingestion/Oral
- Disorders of the lungs, Skin/Dermal,





Potential Health Effects

Inhalation

Acute (Immediate) Chronic (Delayed)

- Exposure to dust may cause irritation.
- No data available.

Skin

Acute (Immediate) Chronic (Delayed)

- May cause irritation. Irritation is likely to be more severe if the skin is moist or wet.
- No data available.

Eye

Acute (Immediate) Chronic (Delayed)

- May cause irritation.
- No data available.

Ingestion

Acute (Immediate)

- Low acute oral toxicity. May cause burns to mouth and esophagus, nausea, vomiting, diarrhea.
- Chronic (Delayed)
- No data available.

Carcinogenic Effects

 This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

See Section 12 for Ecological Information.

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Section 3 - Composition/Information on Ingredients

			Hazardous C	omponents		
Chemical Name	CAS	%(weight)	UN;EINECS	LD50/LC50	EU Classification & R Phrases	Other
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	230-785-7	Skin-Rabbit LD50; >4640 mg/kg	NDA:	NDA

Under United States Regulations (29 CFR 1900.1200 - Hazard Communication Standard), this product is considered hazardous. In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS). This product is considered dangerous according to the European Directive 67/548/EEC. According to the Globally Harmonized Standard for Classification and Labeling (GHS) this product is considered hazardous.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial Inhalation respiration if victim is not breathing. If signs/symptoms continue, get medical attention. Skin IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Flush eyes with water for at least 15 minutes while holding eyelids open. Remove Eye contact lenses if worn. If eye irritation persists: Get medical advice/attention. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. If swallowed give 2-3 glasses of water if victim is conscious and alert. Do not give anything by mouth to an unconscious person. Rinse mouth. Do not leave victim Ingestion unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical. All treatments should be based on observed signs and symptoms of distress in the Notes to Physician patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhea and probable abdominal cramps. Larger doses such as 4 -8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the feces with the diarrhea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity. Treatment should take into consideration both anionic and cation portion of the molecule. Other Information Call 911 or emergency medical service. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

See Section 2 for Potential Health Effects.

Section 5 - Fire Fighting Measures

Extinguishing Media
Unsuitable Extinguishing
Media

- Not combustible. Use extinguishing media suitable for surrounding fire.
- None known.

Firefighting Procedures

Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

or Mina from Colored

Unusual Fire and Explosion Hazards

Non-combustible.

Hazardous Combustion Products

Oxides of phosphorus, oxides of potassium.

Protection of Firefighters

 Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Wear chemical protective clothing that is specifically recommended by the manufacturer. It may

provide little or no thermal protection.

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Section 6 - Accidental Release Measures

Personal Precautions Emergency Procedures Environmental Precautions

- Do not touch or walk through spilled material.
- Keep unauthorized personnel away.
- Affected area should be scraped clean and placed in an appropriate container for

Containment/Clean-up Measures

Sweep or vacuum up and place in an appropriate closed container. Avoid generating dust. Clean up residual material by washing area with water and detergent. Collect washings for disposal. Decontaminate tools and equipment following cleanup.

Prohibited Materials

None known.

Section 7 - Handling and Storage

Handling

Avoid direct or prolonged contact with skin and eyes. Avoid breathing dust. Do not ingest.

Storage

Store in a tightly closed container. Store in a cool/low-temperature, well-ventilated, dry place.

Special Packaging Materials Incompatible Materials or

None known.

Ignition Sources

Strong acids.

Section 8 - Exposure Controls/Personal Protection

Personal Protective Equipment

Pictograms





Respiratory

For limited exposure use an N95 dust mask. For prolonged exposure use an airpurifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face Hands

Wear safety glasses. Wear appropriate gloves.

General Industrial Hygiene Considerations

Do not use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

Engineering Measures/Controls Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

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	Result	ACGIH	Argentina	Canada Ontario	Canada Quebec	China
	STELs	Not established	Not established	Not established	Not established	16 mg/m3 STEL (fre- SiO2 <10%, except asbestos and toxic substances. Use PC STEL of silica When free SiO2 >10%, total) as Particulates not otherwise classified (PNOC)
Tetrapotassium Pyrophosphate	TWAs	10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA (inhalable fraction, particulate matter containing no asbestos and less than 1% crystalline silica); 3 mg/m3 TWA (respirable fraction, particulate matter containing no asbestos and less than 1% crystalline silica) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWAEV (inhalable particulate); 3 mg/m3 TWAEV (respirable particulate) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWAEV (lotal dust, containing no asbestos and less than 1% crystalline silica) as Particulates not otherwise classified (PNOC)	8 mg/m3 TWA (free SiO2 <10%, except asbestos and toxic substances. Use PC TWA of silica When free SiO2 >10%, total) as Particulates not otherwise classified (PNOC)

rykin, kalaja in diliji birga, ir kum ritis.		Exposure L	imits/Guidelines (Con't.)	
Re	esult	Malaysia	New Zealand	OSHA	Singapore
Tetrapotassium TV Pyrophosphate	WAs	10 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, inhalable fraction); 3 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction) as Particulates not otherwise classified	10 mg/m3 TWA (inspirable dust); 3 mg/m3 TWA (respirable dust) as Particulates not otherwise classified (PNOC)	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) as Particulates not otherwise classified (PNOC)	10 mg/m3 PEL as Particulates not otherwise classified (PNOC)

Key to abbreviations

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

STEL = Short Term Exposure Limits are based on 15-minute exposures

TWATime-Weighted Averages are based on 8h/day, 40h/week exposures

TWAEV = Time-Weighted Average Exposure Value

American Conference of Governmental ACGIH = American Communication industrial Hygiene

OSHA — Occupational Safety and Health
Administration

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Section 9 - Physical and Chemical Properties

Physical Form

Solid

Appearance/Description

· White crystalline solid with no odor.

Color : White		Odor : Odorless	
Taste: NDA		Odor Threshold : NDA	
Boiling Point:	NDA	Vapor Pressure:	NDA
Melting Point:	180 C(356 F)	Vapor Density:	NDA
Specific Gravity:	0.945	Evaporation Rate:	NDA
Density:	58.9962 lb(s)/ft³	VOC (Wt.):	NDA
Bulk Density:	NDA	VOC (Vol.):	NDA
pH:	10,4	Volatiles (Wt.):	NDA
Water Solubility:	Soluble 18.5 %	Volatiles (Vol.):	NDA
Solvent Solubility:	NDA	Flash Point:	NDA
Viscosity:	NDA	Flash Point Test Type:	NDA
Half-Life:	NDA	UEL:	NDA
Octanol/Water Partition coefficient:	NDA	LEL:	NDA
Coefficient of water/oil distribution:	NDA	Autoignition:	NDA
Bioaccumulation Factor:	NDA	Bioconcentration Factor:	NDA
Biochemical Oxygen Demand BOD/BOD5:	NDA	Chemical Oxygen Demand:	NDA
Persistence:	NDA	Degradation:	NDA

Section 10 - Stability and Reactivity

Stability

Stable under normal temperatures and pressures.

Hazardous Polymerization Conditions to Avoid

Hazardous polymerization will not occur.Dusting conditions.

Incompatible Materials

Strong acids.

Hazardous Decomposition Products

Oxides of phosphorus. Oxides of potassium.

Section 11 - Toxicological Information

Tetrapota	ssium Pyro	phos	ohate	7320-34-5					
Test Type	Dosage	Units			Duration			Target Organs	Comments
Irritation			Eye	Rabbit	NDA	NDA	Moderate irritation	NDA	NDA
Irritation			Skin.	Rabbit	NDA	NDA	Irritating (non-specific severity)	NDA	NDA
Acute Toxicity	> 4640	mg/kg	Skin	Rabbit	NDA	LD50	NDA	NDA	NDA
Acute Toxicity	> 1000	mg/kg	Ingestion/Oral	Rabbit	NDA	LD50	NDA	NDA	NDA

Key to abbreviations
LD = Lethal Dose

Section 12 - Ecological Information

Ecological Fate

No data found for product.

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Persistence/Degradability

 No specific biodegradation test data located. While the alkalinity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems.

Bioaccumulation Potential Mobility in Soil No data found for product.No data found for product.

Section 13 - Disposal Considerations

Product

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transportation Information

DOT - United States - Department of Transportation

Shipping Name: Not Regulated

TDG - Canada - Transport of Dangerous Goods

Shipping Name: Not Regulated

IMO/IMDG -International Maritime Transport

Shipping Name: Not Regulated

ADN - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Not Regulated

IATA - International Air Transport Association

Shipping Name: Not Regulated

ADR - Europe Transport of Dangerous Goods by Road/Inland Waterway

Shipping Name: Not Regulated

RID - Europe Transport of Dangerous Goods by Railways

Shipping Name: Not Regulated

Section 15 - Regulatory Information

SARA Hazard Classifications

Acute

Risk & Safety Phrases

R36/38 Irritating to eyes and skin.

R22 Harmful if swallowed.

S24/25 Avoid contact with skin and eyes.

S22 Do not breathe dust.

A CONTRACTOR OF THE PROPERTY O			Inventory	a Walio W. A. a. Marka da ana ana ana ana ana ana ana ana ana		
Component	CAS	Australia AICS	Canada DSL	Canada NDSL	China	EU EINECS
Diphosphoric acid, potassium salt (1:4)	7320-34-5	Yes	Yes	No	Yes	Yes

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Component	CAS	EU ELNICS	Japan ENCS	Korea KECL	New Zealand	Philippines PICCS
Diphosphoric acid, potassium salt (1:4)		No	Yes	Yes	Ÿes	Yes
			Inventory (Co			
Component		CAS	Switzerland	SWISS	TSCA	
Diphosphoric acid, potassium salt (1:4)		7320-34-5		No	Yes	

Australia

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Australia - National Pollutant Inventory (NPI) Substance List

Tetrapotassium Pyrophosphate 7320-34-5 Not Listed

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)
 Not Listed

Diphosphoric acid, potassium salt (1:4)
 7320-34-5 >= 95% Not Listed

Australia - Priority Existing Chemical Program

Tetrapotassium Pyrophosphate 7320-34-5 Not Listed

Tetrapotassium Pyrophösphate as Particulates not otherwise classified (PNOC)
 Not Listed

Diphosphoric acid, potassium salt (1:4)
 7320-34-5 >= 95% Not Listed

Other:

The Australia Group - Export Control List - Chemical Weapons Precursors

Tetrapotassium Pyrophosphate 7320-34-5 Not Listed

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

Not Listed

Diphosphoric acid, potassium salt (1:4)
7320-34-5 >= 95% Not Listed

Canada

Labor

Canada - List of Prohibited and Restricted Cosmetic Ingredients (The Cosmetic Ingredient Hotlist)

Tetrapotassium Pyrophosphate 7320-34-5 Not Listed

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)
 Not Listed

Diphosphoric acid, potassium salt (1:4) 7320-34-5 >= 95% Not Listed

Canada - WHMIS - Classifications of Substances

• Tetrapotassium Pyrophosphate 7320-34-5 D2B

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

Not Listed

Diphosphoric acid, potassium salt (1:4)
 7320-34-5 >= 95% D28

Canada - WHMIS - Ingredient Disclosure List

Tetrapotassium Pyrophosphate 7320-34-5 Not Listed

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)
 Not Listed

Diphosphoric acid, potassium salt (1:4)

7320-34-5 >= 95% Not Listed

Environment-

Canada - CEPA - Priority Substances List

Tetrapotassium Pyrophosphate
 Totrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)
 Not Listed

• Totrapolassium Pyrophosphate as Particulates not otherwise classified (PNOC)

Not Listed

● Diphosphoric acid, potassium sait (1:4) 7320-34-5 >= 95% Not Listed

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China

China - Annex I & II - Controlled Chemicals Lists			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
ina - Dangerous Goods List			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
Diphospheric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed

Croatia

Environment			nus esperante de la companya del companya de la companya del companya de la companya del la companya de la comp
Croatia - Air Quality - Emission Limits for Stationary Sources			
 Tetrapotassium Pyrophosphate 	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
 Diphosphoric acid, potassium salt (1:4) 	7320-34-5	>= 95%.	Not Listed
Croatia - Air Quality - Limit Values for Gaseous Pollutants			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
 Diphosphoric acid, potassium salt (1.4) 	7320-34-5	>= 95%	Not Listed
Croatia - Air Quality - Recommended Values for Gaseous Pollutants			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
Croatia - Ozone Depleting Substances - Annex A, Group I			
 Tetrapotassium Pyrophosphate 	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed

Egypt

nvironment Egypt - Air Pollutants - Emissions Limits - Overall Particles				
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed	
Diphosphoric acid, potassium salt (1:4)		>= 95%	Not Listed	
gypt - Air Pollutants - Maximum Limits				
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
Tetrapolassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed	
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed	

Europe

Europe					
Environ	ment				ï
EU - Sul	bstances Depleting the Ozone layer (1005/2009) - Annex I Substanc	es			-
• Tetra	apotassium Pyrophosphate	7320-34-5		Not Listed	ŀ
• Tetra	apotassium Pyrophosphate as Particulates not otherwise classified (PNOC))		Not Listed	ŀ
• Diph	osphoric acid, potassium sait (1:4)	7320-34-5	>= 95%	Not Listed	
·					Ì

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Tetrapolassium Pyrophosphale	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
U - Seveso II Directive (96/82/EC) - Qualifying Quantities for Safety Report	Requireme	ents	
U - Seveso II Directive (96/82/EC) - Qualifying Quantities for Safety Report		ents	Not Listed
Tetrapotassium Pyrophosphate	Requireme 7320-34-5	ents	Not Listed
			Not Listed

Other			
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification	7000 04 5		Not Listed
Tetrapotassium Pyrophosphate	7320-34-5		·
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Prepar	ations		
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
EU CLP (1272/2008) - Annex VI - Table 3,2 - Safety Phrases			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
U - Hazardous Substances Restricted or Prohibited in Electrical Equipment	(2002/95/E	С) (ВоН9	\$)
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed

India

nvironment India - Hazardous Chemical Rules - List of Hazardous and Toxic Chemicals	s			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed	
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed	
ndia - Ozone Depleting Substances - Schedule I				
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed	
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed	

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Indonesia

ndonesia - Hazardous Waste from Non-Specific Sources			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
ndonesia - Hazardous Waste from Specific Sources			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
tenaporatoriam i fropisoopijato ao i ambalateo not onto mae diasamba (mis-ej			Not Listed

Japan.

abor		and the same of th
Japan - ISHL Dangerous Substances		
Tetrapotassium Pyrophosphate	7320-34-5	Not Listed
• Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)		Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5 >=	95% Not Listed
Japan - ISHL Designated Carcinogens		
Tetrapotassium Pyrophosphate	7320-34-5	Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 		Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5 >=	95% Not Listed
Japan - ISHL Harmful Substances Prohibited for Manufacture		
Tetrapotassium Pyrophosphate	7320-34-5	Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 		Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5 >=	95% Not Listed

- Environment				1
Japan - Air Pollution Control Law - Emission Standards for Air Pollutants				1
 Tetrapotassium Pyrophosphale 	7320-34-5		Not Listed	1
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed	
 Diphosphoric acid, potassium salt (1:4) 	7320-34-5	>= 95%	Not Listed	
Inventory - Japan - Industrial Safety and Health Law Substances (ISHL)				
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed	Ì
Diphosphoric acid, polassium salt (1:4)	7320-34-5	>= 95%	Not Listed	

Korea

orea - MOE - Harmful Substances				
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed	
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed	
rea - ISHA - Name, Toxicity and Protective Measures of New Chemical S	ubstances			
			Not Listed	
Tetrapotassium Pyrophosphate	7320-34-5		**	
	100,00		Not Listed	

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From: BRENNTAG PACIFIC INC. To: AQUA SYSTEMS Tuesday, March 25, 2014

Environment -

Korea - MOE - Toxic Chemicals Control Act (TCCA) - Observational Chemicals

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) Not Listed

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

Malaysia

Labor

Malaysia - Occupational Safety & Health - Risk Phrases Not Listed Tetrapotassium Pyrophosphate 7320-34-5

Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

Malaysia - Occupational Safety & Health - Safety Phrases

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate

Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

Environment:

Malaysia - Clean Air Regulations - Noxious and Offensive Substances

Not Listed Tetrapotassium Pyrophosphate 7320-34-5

Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1;4)

Mexico

Environment-

Mexico - Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities

7320-34-5 Not Listed Tetrapotassium Pyrophosphate

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) Not Listed

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

Other

Mexico - Hazard Classifications

Tetrapotassium Pyrophosphate Not Listed 7320-34-5

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) Not Listed

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

Mexico - Regulated Substances

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

New Zealand

New Zealand - Ozone Depleting Substances

Not Listed Tetrapotassium Pyrophosphate 7320-34-5

Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

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Other Agency Information

Other		
AIHA - Emergency Response Planning Guidelines - ERPG-1 Values		
Tetrapotassium Pyrophosphate	7320-34-5	Not Listed
• Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)		Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5 >=	95% Not Listed
AIHA - Emergency Response Planning Guidelines - ERPG-2 Values		
Tetrapotassium Pyrophosphate	7320-34-5	Not Listed
• Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)		Not Listed
Diphospharic acid, potassium sait (1:4)	7320-34-5 >=	95% Not Listed
AlHA - Emergency Response Planning Guidelines - ERPG-3 Values		
Tetrapotassium Pyrophosphate	7320-34-5	Not Listed
• Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)		Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5 >=	95% Not Listed

Philippines

-En	vironment			
F	hilippines - Ozone Depleting Substances - Annex A - Group t			
	Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
ø	Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
•	Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed

F	-Oth	61.	<u> </u>	to comment the second second	a a a recommendad de elemento de esta en esta de esta en esta de elemento de elemento de elemento de elemento d	ing paganian again na paganan na na ang mpaganan na	
l	PI	nilippines - Priority Chemical List					
l	¢	Tetrapotassium Pyrophosphate:	7320-34-5		Not Listed		
ĺ	•	Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed		
ļ	•	Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed		

Singapore

Environment				
Singapore - Air Impurities Emission Limits				
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed	
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed	
Singapore - List of Hazardous Substances				
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed	
• Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed	
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed	
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed	

South Africa

~ La	bor			
5	South Africa - General Machinery Regulations - Notifiable Substances			
•	Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
•	Tetrapolassium Pyrophosphale as Particulates not otherwise classified (PNOC)			Not Listed
4	Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
	en e			

Taiwan

<u></u>	Environment	
	Taiwan - Toxic Chemical Substances Control Act - Threshold Regulated Quantities	

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7320-34-5 Not Listed Tetrapotassium Pyrophosphate Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

Not Listed Diphosphoric acid, potassium salt (1:4) 7320-34-5 >= 95%

Taiwan - Toxic Chemical Substances Control Act - Classification and Control Levels

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) Not Listed

7320-34-5 >= 95% Not Listed Diphospheric acid, petassium sait (1:4)

Thailand

Labor Thailand - Air Contaminant Standards

Not Listed 7320-34-5 Tetrapolassium Pyrophosphale Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

Environment-

Thailand - Quantities of Chemicals

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) Not Listed

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

Other:

Thailand - Hazardous Substances

7320-34-5 Not Listed Tetrapotassium Pyrophosphate

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) Not Listed

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

United States

Environment-U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

U.S. - CAA (Clean Air Act) - Class I Ozone Depletors

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) Not Listed

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

U.S. - CAA (Clean Air Act) - Class II Ozone Depletors

7320-34-5 Not Listed Tetrapotassium Pyrophosphate

Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Not Listed 7320-34-5 Tetrapotassium Pyrophosphate

Not Listed Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)

7320-34-5 >= 95% Not Listed Diphosphoric acid, potassium salt (1:4)

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

7320-34-5 Not Listed Tetrapotassium Pyrophosphate Not Listed

Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) IMPORTANT: While Brenniag believes the information contained herein to be accurate, Brenniag makes no representation or warranty, express

or implied, regarding, and assumes no liability for, the accuracy opagarpletaness of the information. The Buyer assumes all responsibility for handling, using and/or reselling the Product in accordance with the applicable federal, state, and local law. This MSDS shall not in any way limit or preclude the operation and effect of any of the provisions of Brenntag's terms and conditions of sale.

To: AQUA SYSTEMS Thesday, March 25, 2014 From: BRENNTAG PACIFIC INC.

Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs Tetrapotassium Pyrophosphate Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
Diphosphoric acid, potassium salt:(1:4)	7320-34-5	>= 95%	.Not Listed
U.S CERCLA/SARA - Section 313 - PBT Chemical Listing			
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed
U.S RCRA (Resource Conservation & Recovery Act) - List for Hazardous	Constituent	ės	
Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
 Diphosphoric acid, potassium salt (1:4) 	7320-34-5	>= 95%	Not Listed
U.S SDWA (Safe Drinking Water Act) - CCL (Contaminant Candidate List)			:
■ Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
 Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC) 			Not Listed
Diphosphoric acid, potassium saft (1:4)	7320-34-5	>= 95%	Not Listed

Vietnam

_	Environment		
	Vietnam - Air	Quality - Ambient Air Quality S	it

VI	etnam - Air Quality - Ambient Air Quality Standards			
•	Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
•	Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
9	Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed

Vietnam - Air Quality - Industrial Emission Standards

•	Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
•	Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
ø	Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed

- Vi	etnam - Air Quality - Maximum Allowable Concentration of Hignly Hazard	ious Gnemi	cais	
-	Tetrapotassium Pyrophosphate	7320-34-5		Not Listed
•	Tetrapotassium Pyrophosphate as Particulates not otherwise classified (PNOC)			Not Listed
•	Diphosphoric acid, potassium salt (1:4)	7320-34-5	>= 95%	Not Listed

Other Information

This product meets the compositional requirements of: 21 CFR 182.1 Substances that are generally regarded as safe TETRAPOTASSIUM PYROPHOSPHATE - Fed Reg. 12/18/1979 184.1870 page 74857.

Section 16 - Other Information

Preparation Date

Disclaimer/Statement of Liability

The information herein is given in good faith but no warranty, expressed or implied, is made.

> Key to abbreviations NDA = No Data Available

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