



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name : Tetrapotassium Pyrophosphate, Tech. Grade
Chemical Name: Pyrophosphoric Acid
CAS No. : 7320-34-5

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

Identified uses : Laboratory chemicals, manufacture of substances.

1.3 Details of the supplier of the safety data sheet

Company: Aurora Industry Co.,Ltd.
Tel: 0411-82288674
Address: Room 7033, No.9-1, Haifu Road, Dalian Free Trade Zone, China

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture (GHS-US)

Skin irritation Category (2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity- single exposure(Category 3),

Respiratory system H335

Physical Hazards

NONE

Hazard Statement

H315: Causes skin irritation

H319: Causes serious eye irritation

H335: May cause respiratory irritation

OSHA Defined Hazards

This product does NOT contain any products considered hazardous under the Federal OSHA HazCom. Standard 29 CFR 1910.1200.

HNOC - Hazards Not Otherwise Classified

No other hazards classified



Signal Word

Warning

Irritant

2.2 GHS Precautionary Statements - Prevention, Response, Storage, Disposal

P261: Avoid breathing dust/fume/gas/mist/vapours/spray

P264: Wash skin thoroughly after handling

P271: Use only outdoors or in a well-ventilated area

P280: Wear protective gloves/protective clothing/eye protection/face protection



P302+352: IF ON SKIN: Wash with soap and water
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P320: Specific treatment is urgent (see supplemental first aid instructions on this label.
P332+313: If skin irritation occurs: Get medical advice/attention
P337+313: If eye irritation persists get medical advice/attention
P362: Take off contaminated clothing and wash before reuse
P403+233: Store in a well-ventilated place. Keep container tightly closed
P405: Store locked up
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight: 330.4 Chemical FORMULA: $K_4 P_2 O_7$

CAS#:	Common Name/Synonyms:	% by Wt.
7320-34-5	Tetrapotassium Pyrophosphate	95%
7732-18-5	water	5%

4. FIRST AID MEASURES

Description of first aid measures

General Advice:

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If Inhaled:

Remove to fresh air. Rinse nose and mouth with water. breathing becomes difficult, oxygen may be given, preferably with a physician's advice. If not breathing, give artificial respiration. Get medical attention.

In Case Of Skin Contact:

In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention if irritation develops or persists. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before reuse.

In Case Of Eye Contact:

Flush eyes with large quantities of running water for a minimum of 15 minutes. If present and easy to do, remove contact lenses. Hold eyelids apart during the flushing to ensure rinsing of entire surface of the eye and lids with water. DO NOT let victim



rub eye(s). Do not attempt to neutralize with chemical agents. Oils/ointments should not be used at this time. Get medical attention if eye irritation occurs.

If Swallowed:

If victim is conscious and alert, give 1-2 glasses of water to drink. Never give anything to eat or drink to someone who is unconscious, having convulsions, or unable to swallow. Seek immediate medical attention. Do not leave victim 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.

Most important symptoms and effects, both acute and delayed:

ACUTE: At high dust concentrations, irritation of eyes, skin, nose and upper respiratory tract by chemical or mechanical action may occur.

Skin: May cause irritation

Eye: Irritation and possible damage

Inhalation: Dust may cause irritation of respiratory tract and symptoms of bronchitis may result.

Ingestion: May result in irritation of mouth, throat and stomach

CHRONIC: None Found

Large doses may cause nausea, vomiting and diarrhea. Systemic oral toxicity is extremely rare and has consisted of acidosis and hypocalcemic tetany.

Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

5. FIRE AND EXPLOSION DATA

Suitable Extinguishing Media:

Not combustible. Use extinguishing method suitable for surrounding fire. Spray water, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media:

None specified

Specific Hazards arising from the chemical:

Oxides of phosphorus, potassium oxides.

Special protective equipment and precautions for fire-fighters:

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Fire-fighting equipment/instructions

Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Specific Methods

Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.



6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Do not touch or walk through spilled material. Keep Unauthorized personnel away. After wearing and using recommended protective equipment, stop source of spill if safe to do so and dike area to contain spill. See Section 8 for personal protective equipment.

Environmental Precautions:

Consult with environmental regulatory agencies for acceptable procedures of disposal. Do not contaminate drains.

Methods and Materials for Containment and Clean Up:

Sweep or vacuum up and place in an appropriate closed container. Clean up residual material by washing area with water and detergent. Decontaminate tools and equipment following clean up. If spilled on the ground, the affected area should be scraped clean and placed in an appropriate container for disposal. Large spills should be handled according to a predetermined plan. Product forms a slippery/greasy layer with water.

7. HANDLING AND STORAGE

Precautions for safe handling:

Use appropriate personal protective equipment as specified. Avoid direct or prolonged contact with skin and eyes. Avoid breathing dusts. Do not ingest. Store in an area that is cool, dry and well ventilated. Keep away from food stuffs or animal feed. Product is hygroscopic. Storage length 24 months.

Conditions for safe storage:

Keep in a dry place. Store at room temperature in the original container. Keep container tightly closed. Provide appropriate exhaust ventilation at places where dust is formed.

Incompatibilities:

Strong acids and oxidizing agents.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Occupational Exposure Limits:

Chemical Identity:	CAS #:	Exposure Limit Values		SOURCE	OSHA/PPM
		TWA	STEL		PEL
Tetrapotassium Pyrophosphate	7320-34-5			ACGIH Threshold Limit Values	15mg/cu m
				ACGIH Threshold Limit Values	
				ACGIH Threshold Limit Values	



Exposure Limits and Appropriate Engineering Controls:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting OSHA requirements. The following limits (ACGIH, OSHA and other) apply to this material, where, if indicated, S=skin and C=ceiling limit:

Particulates Not Otherwise Regulated Respirable Fraction: OSHA TWA: 5 mg/cu M

Individual Protection Measures, (Personal Protective Equipment):

Eye Protection

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

Skin Protection

Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Other Protection:

Minimize breathing dust. Avoid prolonged or repeated breathing of dust and contact with skin. Remove contaminated clothing; launder before reuse. Cleanse skin thoroughly after contact, before meals and end of work period.

Respiratory Protection

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the latest OSHA standard (29 CFR 1910.134) and/or ANSI Z88.2 recommendations.

Ventilation Limits:

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

Hygienic Practices:

All food / smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking or smoking, hands and face should be thoroughly washed. Facilities storing or using this material should be equipped with an eyewash and safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor:	Odorless white crystalline granular.
pH:	10.0 - 11.0
Melting Point:	1090C
Freezing Point:	No data available



Boiling Point:	Over 1500C
Flash Point:	N/A
Evaporation Rate:	No data available
Solubilities:	65 @ 25C
Specific Gravity:	No data available
Bulk Density:	0.96 g/m
Flammable Limits:	Product is not flammable
UEL:	Not determined
LEL:	Not determined
Vapor Pressure(mm/hg):	Non-Volatile
Vapor Density(air=1):	Non-Volatile
Autoignition Temp:	No data available
Decomposition Temp:	No data available
Reactivity In Water:	No data available
Viscosity:	No data available
Other Information:	

10. STABILITY AND REACTIVITY

Chemical Stability and Reactivity:

This material is stable under normal handling and storage conditions.

Possible Hazardous Reactions:

No dangerous reactions known

Conditions to Avoid:

Moisture.

Incompatible Materials:

Strong acids and oxidizing agents.

Hazardous Decomposition Products:

No decomposition

11. TOXICOLOGICAL INFORMATION

Information On The Likely Routes Of Exposure: Inhalation, Ingestion and Dermal
Symptoms Related To The Physical, Chemical And Toxicological Effects:

Inhalation Effects:	No test data found for product.
Skin Effects:	Non irritating at 500 mg/kg (rabbit).
Dermal Toxicity:	LD50 - lethal dose 50% of test species > 4640 mg/kg, rabbit.
Eye Effects:	Moderately irritating to unwashed eyes; mildly irritating to washed eyes (rabbit).
Ingestion Effects:	LD50 - lethal dose 50% of test species > 1000 mg/kg rat.
Sensitization:	Not a sensitizer.
Carcinogenicity/Mutagenicity:	



This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens. No information found on Mutagenicity.

Reproductive Effects: No data found for product.
Neurotoxicity: No data found for product.
Target Organs: No data found for product.
Additional Toxicological Information: No additional information found.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data found for product.
Degradability: No data found for product.
Bioaccumulative potential:
Mobility in the Soil:
Additional Adverse effect on environment:
No additional information found.

13. DISPOSAL CONSIDERATIONS

Disposal Instructions and Regulations:

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Be advised that state/local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state/local regulations regarding proper disposal of material.

Hazardous Waste Code: Not considered a hazardous waste

Container Disposal Information:

Be advised that state/local requirements for container disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state/local regulations regarding proper disposal of container.

14. TRANSPORT INFORMATION

US DOT, IATA, IMO, ADR:

Proper Shipping Name: Tetrapotassium Pyrophosphate

D. O. T. Hazard Class: Not regulated by D.O.T. UN #: None

Label Requirement: None RQ: N/A

Placard: None CAS: N/A

Packing Group: 7320-34-5 ERG Book Information: 171

Environment Hazards: No Marine Pollutant: No

Special Precautions: No IATA: Not regulated as dangerous goods.

15. REGULATORY INFORMATION



US Federal - OSHA Status:

This product does NOT contain any products considered hazardous under the Federal OSHA HazCom. Standard 29 CFR 1910.1200.

TSCA Status: Listed/Reportable

U.S. SARA Reporting Requirements:

SARA Title III Hazard Classes Section 302 - EXTREMELY HAZARDOUS

SUBSTANCES: This product does NOT contain ingredients listed in Appendix A and B as Extremely Hazardous substances.

SARA Title III Hazard Classes Sections 311/312: Immediate (acute) health hazard

SARA Section 313 Toxic Chemicals: This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act:

CAS# Chemical Name:

This material does NOT contain any chemical components with known CAS numbers that exceed the threshold reporting levels.

SARA Superfund Section 110: This product does NOT contain ingredients listed as hazardous substances on the Priority List of CERCLA Hazardous substances.

CERCLA, 40 CFR 117, 302: This product does NOT contain ingredients specified in the List of Extremely Hazardous Substances.

CERCLA listed substances are: none

Other Federal Reporting Requirements:

CAA: Not listed.

CWA: Not listed.

RCRA: Not considered a hazardous waste.

State Reporting Requirements:

State Right to Know Laws:

CAS# 7320-34-5

State RTK PA

Chemical Name Tetrapotassium Pyrophosphate

CALIFORNIA PROPOSITION 65: This product does NOT contain a chemical or chemicals subject to California Proposition 65

Michigan Critical Materials: This product does NOT contain ingredients listed on the Michigan Critical Materials Register.

Global Lists/International Inventories:

Canada CEPA: All intentional ingredients are listed on the DSL.

Canada WHMIS: Not controlled.

16. OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall AUCO be liable for any claims, losses, or damages of any third party or for lost



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