

Material Safety Data Sheet

(Tris(2-chloroisopropyl) Phosphate)

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1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification

Corporate MSDS Number: TCPP CAS Number: 13674-84-5
Product Name TCPP
Chemical Formula C₉H₁₈Cl₃O₄P
Chemical Name Tris(2-chloroisopropyl) Phosphate
Product Use Rigid foam flame retardant

Company Identification

MANUFACTURER/DISTRIBUTOR: Cosutin Industrial CO., Limited
Add: Unit B, 10/F Lee May Building 788-790 Nathan Road, Mongkok, Kowloon, H.K.
Tel.: +852 21395855 Fax: +852 81673777
PHONE NUMBERS Product Information: +86 136 31481545
Transport Emergency: +86 136 31481545
Medical Emergency: +86 136 31481545

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS No.	Typical Wt. %
Tris(2-chloroisopropyl) Phosphate	13674-84-5	100%

3. HAZARDS IDENTIFICATION

Emergency Overview

Harmful if swallowed.

Irritating to eyes, respiratory system and skin.

Eyes: Irritating to eyes. Avoid contact with eyes.

Skin: Irritating to skin. Avoid contact with skin.

Inhalation: Irritating to mucous membranes. Irritating to respiratory system.

Ingestion: Harmful if swallowed.

Chronic Effects: No information available.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions: Not available

Interactions with Other Chemicals: Not available

Potential Environmental Effects: There is no known ecological information for this product

4. FIRST AID MEASURES

General Advice: Take off contaminated clothing and shoes immediately. Show this safety data sheet to the doctor in attendance.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. Consult a physician.

Ingestion: Do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Consult a physician.

Notes to Physician: Treat symptomatically

Protection of First-aiders: Use personal protective equipment. Avoid contact with skin, eyes and clothing.

5. FIRE FIGHTING MEASURES

Flammable Properties: Not available

Suitable Extinguishing Media: Water spray. Carbon dioxide (CO₂). Dry powder. Foam.

Unsuitable Extinguishing Media: Not available

Hazardous Combustion Products: Not available

Explosion Data

Sensitivity to mechanical impact: Not available

Sensitivity to static discharge: Not available

Specific Hazards Arising from the Chemical:

Thermal decomposition can lead to release of irritating gases and vapors.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA
Flammability 1

Health 1
Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing.

Environmental Precautions: Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment: Not available

Methods for Cleaning up: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Clean contaminated surface thoroughly.

Other Information: Not applicable

7. HANDLING AND STORAGE

Handling: Use only in an area equipped with a safety shower. Ensure adequate ventilation. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Controls: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection: Tightly fitting safety goggles.

Skin Protection: Protective gloves.

Respiratory Protection: In case of insufficient ventilation wear suitable respiratory equipment.

General Hygiene Considerations: General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless

Physical State: Liquid

Odor: Not available

PH: Not available

Flash Point: 185°C

Method: Closed cup

Autoignition Temperature: >500°C

Boiling Point/Range: 220°C

Melting Point/Range: -42°C

Flammability Limits in Air: Lower Not available, Upper Not available

Vapor Pressure: 2 mmHg @ 25 °C

Vapor Density: Not available

Specific Gravity: 1.290@20°C

Water Solubility: 1.6g/L

Reactivity in Water: Not available

Molecular Weight: 327.57

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Heat, flames and sparks

Incompatible Materials: Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide (CO₂), Oxides of phosphorus, Hydrogen chloride gas, Halogenated compounds.

Possibility of Hazardous Reactions: None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name: TCPP

LD50 Oral: 1,500 mg/kg Rat

LD50 Dermal: 1230 mg/kg Rabbit

LC50 Inhalation: 5 mg/L Rat 4 h, 17.8 mg/L Rat 1 h

Chronic Toxicity

Carcinogenicity: There are no known carcinogenic chemicals in this product

Irritation: Not available

Corrosivity: Not available

Sensitization: Not available

Neurological Effects: Not available

Mutagenic Effects: Not available

Reproductive Effects: Not available

Developmental Effects: Not available

Target Organ Effects: Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Persistence / Degradability: Not available

Bioaccumulation / Accumulation: Does not bioaccumulate.

Mobility in Soil: Not available

Trichloropropyl Phosphate: log Pow = 2.59

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Contact waste disposal services. Dispose of in accordance with local regulations.

Contaminated Packaging: Dispose of in accordance with local regulations. Empty containers should be taken for local recycling, recovery or waste disposal.

US EPA Waste Number: Not available

14. TRANSPORTATION INFORMATION

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated.

15. REGULATORY INFORMATION

U.S.A. (TSCA)	Complies			
Canada (DSL)	Complies			
EU (ELINCS)	Does not Comply			
EU (EINECS)	Complies			
Japan (ENCS)	Complies			
China	Complies			
Korea (KECL)	Complies			
Philippines (PICCS)	Complies			
Australia (AICS)	Complies			
Chemical Name: Trichloropropyl Phosphate				
U.S.A. (TSCA)	Canada (DSL)	EU (EINECS)	EU (ELINCS)	
X	X	-	X	
Japan (ENCS)	China	Korea (KECL)	Philippines (PICCS)	Australia AICS)
X	X	X	X	X

USA Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	-
Chronic Health Hazard	-
Fire Hazard	-
Sudden Release of Pressure Hazard	-
Reactive Hazard	-

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know
Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations

(CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class: Not determined

16. OTHER INFORMATION

Revision Information

Revision Data

19 May 2011

Revision Number 4

Supersedes Revision Dated

06-Jun-2011

Disclaimer:

Information included in this document is given to the best of our knowledge, however, no warranty is made that the information is accurate or complete. We do not accept any responsibility for damages by the use of the document

End of MSDS