Material Safety Data Sheet

==========Section 1: Product Identification==========

Product Name: TRIS(2-CHLOROPROPYL) PHOSPHATE (TCPP)
Chemical name/synonyms: TCPP
Manufactured By:
SHANDONG CHENXU NEW MATERIAL CO., LTD
SOUTH OF INNOVATION STREET EAST EXTENSION, HIGH – TECH ZONE, YUCHENG, DEZHOU CITY, SHANDONG, CHINA
Information In Case of Emergency
Telephone:86-531-87978111 Ext.15
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==========Section 2: Composition/Information Ingredients==========

Component Concentration	(weight percent, %)	CAS No.	EC No.
TRIS(2-CHLOROPROPYL) PHOSPHATE	99.5	13674-84-5	237-158-7

==========Section 3: Hazards Identification==========

Classification
USA: The product is not known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.
Canada: Not a controlled product under WHMIS.
Classification according to Regulation (EC) No 1272/2008[CLP]: This product is not classified as hazardous.
GHS classification in accordance with 29 CFR 1910.1200: Not a hazardous substance or mixture.
GHS label elements : Not a hazardous substance or mixture.
Potential Health Effects:
Eye Contact: Contact with eyes may cause irritation
Skin Contact: Not expected to cause skin irritation in normal use conditions.
Inhalation: Not expected to cause respiratory irritation in normal use conditions.

==========Section 4: First Aid Measures ==========

> Description of First Aid Measures
General Advice Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a

physician if feel uncomfortable.

Skin Contact Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Inhalation

Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.

Protecting of First-aiders

Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

==========Section 5: Fire and Explosion Data ==========

> Extinguishing Media

Suitable Extinguishing

Media Dry chemical, carbon dioxide, water spray,alcohol-resistant foam.

Unsuitable

Extinguishing Media Do not use a solid water stream as it may scatter or spread fire.

> Specific Hazards Arising from the Substance or Mixture

1 Containers may explode when heated.

2 Fire exposed containers may vent contents through pressure relief valves.

3 May expansion or decompose explosively when heated or involved in fire.

> Advice for Firefighters

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

2 Fight fire from a safe distance, with adequate cover.

3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

==========Section 6: Accidental Release Measures==========

Personal Precautions, Protective Equipment and Emergency Procedures

1 Ensure adequate ventilation. Remove all sources of ignition.

2 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

3 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

> Environmental Precautions

1 Prevent further leakage or spillage if safe to do so.

2 Discharge into the environment must be avoided.

> Methods and Materials for Containment and Cleaning Up

1 Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.

2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

==========Section 7: Handling and Storage ==========

> Precautions for Handling

1 Handling is performed in a well ventilated place.

2 Wear suitable protective equipment.

3 Avoid contact with skin and eyes.

4 Keep away from heat/sparks/open flames/ hot surfaces.

5 Take precautionary measures against static discharges

> Precautions for Storage

1 Keep containers tightly closed.

2 Keep containers in a dry, cool and well-ventilated place.

3 Keep away from heat/sparks/open flames/ hot surfaces.

==========Section 8: Exposure Controls/Personal Protection==========

> Control Parameters

Occupational Exposure Limit Values

No information available

Biological Limit Values

No information available

> Engineering Controls

1 Ensure adequate ventilation, especially in confined areas.

2 Ensure that eyewash stations and safety showers are close to the workstation location.

3 Use explosion-proof electrical/ventilating/lighting/equipment.

4 Set up emergency exit and necessary risk-elimination area.

> Personal Protection Equipment

Eye Protection Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US).

Hand Protection Wear protective gloves（such as butyl rubber） , passing the tests according to EN 374(EU),US F739 or AS/NZS 2161.1 standard.

Respiratory protection

If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

Skin and Body

Protection Wear fire/flame resistant/retardant clothing and antistatic boots.

==========Section 9: Physical/Chemical Properties==========

Appearance: Colorless transparent oily liquid

Melting Point/Freezing Point (℃): <-20

Initial Boiling Point and Boiling Range (℃): 288

Flash Point (℃)(Closed Cup): 218

Flammability: Not applicable

Vapor Pressure (KPa): 0.0014 Pa（25℃）

Relative Density(Water=1): 1.29（20 ° C）

Water solubility (g/l): 1,08 g/L, 20 °C

Viscosity, dynamic (mPa.s): 60-70 mPa.s, 20 °C

==========Section 10: Stability and Reactivity==========

Reactivity: Contact with incompatible substances can cause decomposition or other chemical reactions.

Chemical Stability Stable under proper operation and storage conditions.

Conditions to Avoid Incompatible materials, heat, flame and spark.

Hazardous Decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

==========Section 11: Toxicological information==========

> Acute Toxicity

CAS No.	LD50(Oral)	LD50(Dermal)	LC50(Inhalation, 4h)
13674-84-5	1500mg/kg(Rat)	No information available	No information available

Mutagenic Effect: Did not show mutagenic effects in animal experiments.

Skin irritation: Not expected to be an irritant.

Sensitization: aluminium hydroxide is not a skin sensitizer.

Reproductive Toxicity: Foetal toxicity observed at dose causing maternal toxicity LOAEL in rabbits: 100mg/kg/day.

==========Section 12: Ecological information==========

12.1 Toxicity:

Acute (short-term) toxicity:

LC50(96h, Fish): 56.2 mg/L

LC50(48h, Crustacea): 131 mg/L

EC50(72h, Algae/aquatic plants): 82 mg/L

Chronic (long-term) toxicity:

NOEC(Fish): Not available.

NOEC(Crustacea): 32 mg/L

EC50(Algae/aquatic plants): Not available.

==========Section 13: Disposal Considerations==========

Disposal guidance:

No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Tonnage quantities of product should, if possible, be used for an appropriate application.

NPRI (Canada): aluminum hydroxide is not listed on the Canadian National Pollutant Release Inventory.

Waste treatment methods: Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

==========Section 14: Transport information==========

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	Not regulated	Not regulated	Not regulated	Not regulated
UN Proper shipping name	Not regulated	Not regulated	Not regulated	Not regulated
Transport hazard Class(es)	Not regulated	Not regulated	Not regulated	Not regulated
Packing group	Not regulated	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of Marpol and the IBC Code	Not regulated	Not regulated	Not regulated	Not regulated

==========Section 15: Other Information==========

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is guaranteed under our General Conditions of Sale.

Edition: December 23, 2023 – This data sheet replaces all previous issues