

MATERIAL SAFETY DATA SHEET (MSDS)

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Revision Date: December 6, 2012

PRODUCT NAME: TRIS(2-CHLOROPROPYL) PHOSPHATE

1. Product Identification:

Synonyms: Tris(2-chloroisopropyl) Phosphate, Fyrol PCF, Tris(chloropropyl) Phosphate, TCPP, Tris (beta-chloroisopropyl) Phosphate

CAS No.: 13674-84-5

Molecular Weight: 327.56

Chemical Formula: C₉H₁₈Cl₃O₄P

Product Codes: CY-06

2. Composition:

Ingredient	CAS No	Percent	Hazardous
Tris (2-Chloropropyl) Phosphate	13674-84-5	99.9%	no
Water	7732-18-5	0.1%	no

3. Stability:

This chemical is stable under normal laboratory conditions.

4. Volatility:

Vapor Pressure: Not available.

Vapor Density: Not available.

5. Flammability(Flash Point):

The flash point for this compound is > 93 C; It is probably combustible. Fires involving this material can be controlled with a dry chemical, carbon dioxide, or Halon extinguisher.

6. Reactivity:

This chemical may hydrolyze under acidic or alkaline conditions.

7. Handling Procedures:

Acute/Chronic Hazards:

When heated to decomposition this chemical emits very toxic fumes.

Recommended Respirator:

Where the neat test chemical is weighed and diluted, wear a NIOSH-approved half face respirator equipped with an organic vapor/acid gas cartridge (specific for organic vapors, HCL, acid gas and SO₂) with a dust/mist filter.

Storage Precautions:

You should store in sealed condition without direct sunshine. STORE AWAY FROM SOURCES OF IGNITION.

Spills and Leakage:

If you spill this chemical, FIRST REMOVE ALL SOURCES OF IGNITION. Then, use absorbent paper to pick up all liquid spill material. Your contaminated clothing and absorbent paper should be sealed in a vapor-tight plastic bag for eventual disposal. Solvent wash all contaminated surfaces with ethanol followed by washing with a soap and water solution. Do not reenter the contaminated area until the Safety Officer (or other responsible person) has verified that the area has been properly cleaned.

Disposal and Waste Treatment: Not Available.

Recommended Glove Materials: Not Available.

8. Emergency Procedures:

Skin Contact:

IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.

Inhalation:

IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, self-contained Breathing Apparatus should be used; if not available, use a level of protection greater than or equal to that advised under respirator recommendation.

Eye Contact:

First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

Ingestion:

DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. Be prepared to transport the victim to a hospital if advised by a physician. If the victim is convulsing or unconscious. Do not give anything by mouth. Ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

Symptoms:

Information concerning symptoms of exposure to this chemical is not available.

9. Toxicity

Toxicity: (abbreviations)

Typ. Dose	Mode	Specie	Amount	Units	Other
LD50	ivn	mus	56	mg/kg	

AQTX/TLM96: Not Available

Sax toxicity evaluation:

THR: HIGH intravenous

CARCINOGENICITY: Not available

MUTATION DATA: Not available

TERATOGENICITY: Not available

10. Standards, Regulations & Recommendations:

OSHA: NONE

ACGIH: NONE

NIOSH CRITERIA DOCUMENT: NONE

NFPA HAZARD RATING: HEALTH (H): NONE

FLAMMABILITY (F): NONE

REACTIVITY (R): NONE

11. Other Toxicity Data:

Status: Reported in EPA TSCA inventory, 1983.

12. Other Data

Proper Shipping Name: Not restricted

UN/ID NUMBER: NONE

HAZARD CLASS: NONE

SUBSIDIARY RISK: NONE

PACKING GROUP: NONE

PACKAGING: NONE

SPECIAL PROVISIONS: NONE

13. Physical and Chemical Properties:

Appearance: Clear, colorless viscous liquid.

Solubility:

※ Water: <1mg/mL @ 19.5 C (RAD)

※ 95% Ethanol: >=100mg/mL @ 19.5 C (RAD)

※ Acetone: >= 100mg/mL @ @ 19.5 C (RAD)

Specific Gravity: 1.280-1.290

PH: No information found.

14. Regulatory Information

Labelling in accordance with the EEC directives:

Symbol: Xn, hazard description: harmful

Tris (β -chloroisopropyl)- Phosphate

R 22: Harmful if swallowed

Not subject to the German Regulation on Flammable Liquids (VbF).

This substance is not subject to IMO IMDG Code.

15. Transport Information:

SARA Title III: Section 304 - CERCLA:

This product does not contain a hazardous substance regulated under Section 304 for emergency release

notification (CERCLA List).

TSCA (Toxic Substances Control Act): Substance is listed.

This substance is not subject to IMO IMDG Code.

16. Other Information:

Sax Toxicity Evaluation: THR: HIGH intravenous.