Section 1. Product and Company Identification

Product Name Tricresyl Phosphate
CAS Number 1330-78-5

Parchem - fine & specialty chemicals
415 Huguenot Street
New Rochelle, NY 10801
(914) 654-6800 **(914) 654-6899**
parchem.com **info@parchem.com**

EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
All other Origins: 1 (813) 248-0585
Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture
GHS Classifications
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)
Eye irritation (Category 2B)

GHS Label Elements
Pictograms:

Signal word: WARNING

Hazard and precautionary statements
Hazard statements
H303 May be harmful if swallowed.
H320 Causes eye irritation
H400 Very toxic to aquatic life.

Precautionary statements
P273 Avoid release to the environment.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
P281 Use personal protective equipment as required.

OSHA Hazards: No OSHA Hazards

NFPA Rating
Health: 1
Flammability: 1
Reactivity: 0

Other hazards which do not result in classification

Potential Health Effects
Eye Contact: May be irritating to the eyes.
Ingestion: Considered harmful through ingestion.
Inhalation: May cause irritation to the respiratory tract through inhalation.
Skin Contact: May cause skin irritation if product absorbs through the skin.

Section 3. Composition / Information on Ingredients

Common Name Tricresyl Phosphate
Synonym(s) Tris(tolyloxy)phosphine oxide; Tritolyl phosphate; Phosphoric Acid, Tris(Methylphenyl) Ester; TCP
CAS Number 1330-78-5

COMPONENT	CAS NUMBER	CONCENTRATION
Tricresyl Phosphate	1330-78-5	99% wt.

Section 4. First Aid Measures

General advice: Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Skin: Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. Contact a doctor. If irritation persists, get medical attention.
Inhalation: Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.
Eyes: Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.
Ingestion: Do NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration If victim is conscious and alert, give 2-4 cups of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Section 5. Firefighting Measures

Suitable (and unsuitable) extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products): Carbon oxides, Oxides of phosphorus are expected to be, under fire conditions, the primary hazardous decomposition products.
Special protective equipment and precautions for firefighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Actively avoid the inhalation of vapors, mist, dust, or gas. Confirm adequate ventilation prior to use of product. Remove personnel from the danger zone.
Environmental precautions: Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.
Methods and materials for containment and cleaning up: Absorb with an inert dry material and place in an appropriate waste disposal container. Keep disposal containers closed when finished.

Section 7. Handling and Storage

Precautions for safe handling: Use proper personal protective equipment when handling material to prevent contact with skin and eyes. Do not inhale vapor or mist.
Conditions for safe storage, including any incompatibilities: Keep container closed in a dry, well ventilated location. Keep containers in an upright position to prevent leaks/spills.

Section 8. Exposure Controls / Personal Protection

Control parameters, e.g., occupational exposure limit values or biological limit values
Occupational Exposure Limits: No known exposure limits.

Individual protection measures, such as personal protective equipment:
Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Eye protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9. Physical and Chemical Properties

Appearance (physical state, color, etc.): Liquid. Colorless to pale yellow. Viscous
Odor: Odorless
Odor threshold: Specific data not available
pH: Specific data not available
Freezing point: -20°C (-4°F) - pour point
Initial boiling point and boiling range: 265°C (509°F) at 13 hPa (10 mmHg)
Flash point (Closed Cup): 250°C (482°F)
Evaporation rate: Specific data not available
Flammability (solid, gas): Not flammable or combustible
Upper/Lower flammability or explosive limits: Specific data not available
Vapor pressure: 0.04 hPa (0.03 mmHg) at 25°C (77°F)
Vapor Density: 12.70
Relative Density: 1.143 g/cm^3 at 25°C (77°F)
Solubility: Specific data not available
Partition coefficient (n-Octanol/Water): log Pow 5.93
Auto-ignition temperature: Specific data not available
Decomposition temperature: Specific data not available
Formula (Tricresyl Phosphate): $C_{21}H_{21}O_4P$
Molecular Weight (Tricresyl Phosphate): 368.36 g/mol

Section 10. Stability and Reactivity

Chemical Stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: No data available
Conditions to avoid (e.g., static discharge, shock, or vibration): No data available
Incompatible materials: Strong oxidizing agents
Hazardous decomposition products: Carbons oxides and Oxides of phosphorus are expected to be, under fire conditions, the primary hazardous decomposition products.

Section 11. Toxicological Information

Product Summary: No data available for the teratogenic, mutagenic, or reproductive toxicity effects of this product. No data available to designate product as an aspiration hazard or to cause specific target organ toxicity through single or repeated exposure.
Acute Toxicity: LD50 (Oral) Rat 3,000 mg/kg

Irritation
Eyes: Rabbit - mild eye irritation - 24 hours
Respiratory or Skin Sensitization: No data available

Skin: No data available

Carcinogenicity
IARC: No component of this product, present at levels greater than or equal to 0.1%, is identified as probable or confirmed human carcinogen by IARC.
ACGIH: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.

Other Hazards
Eyes Contact: Can cause eye irritation.
Ingestion: Can be harmful if swallowed.
Inhalation: Can be harmful if inhaled. May cause respiratory tract irritation.
Skin Contact: Harmful if absorbed through skin. Can irritate the skin.

Section 12. Ecological Information

Ecotoxicity (aquatic and terrestrial, where available)
Acute algae toxicity (Tricresyl Phosphate)
EC50 Growth inhibition / 96 h / Scenedesmus pannonicus - 1.3 mg/l

Acute Daphnia Toxicity (Tricresyl Phosphate)
EC50 / 48h / Water flea - 2.3 mg/l

Acute fish toxicity (Tricresyl Phosphate)
LC50 / 96h / Rainbow trout - 0.26 mg/l

Persistence and degradability: No data available
Bioaccumulative potential: Bioaccumulation: Fathead minnow - 32 days / Bioconcentration factor (BCF): 165
Other adverse effects: An environmental hazard is possible if product is handled or disposed of improperly. Product is very toxic to aquatic life.

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Description of waste residues and information on their safe handling and methods of disposal

UN Number: 2574
UN proper shipping name: Tricresyl phosphate
Transport hazard class(es): 6.1
Packing group: II

IMDG
UN Number: 2574
Class: 6.1
Packing Group: II
EMS-No: F-A, S-A
Proper shipping name: Tricresyl Phosphate
Marine pollutant: Yes

IATA
UN Number: 2574
Class: 6.1
Packing Group: II
Proper shipping name: Tricresyl phosphate

Section 15. Regulatory Information

Safety, health, and environmental regulations specific for the product in question
OSHA Hazards: No OSHA hazards

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: No SARA Hazards

CERCLA: No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Massachusetts Right to Know Components
No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right to Know Components
Tris(methylphenyl) phosphate (CAS-No. 1330-78-5)
Revision Date: 2007-03-01
New Jersey Right to Know Components
Tris(methylphenyl) phosphate (CAS-No. 1330-78-5)
Revision Date: 2007-03-01

California Prop 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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