

Section 1. Product and Company Identification

**Product Name** Tri-Isobutyl Phosphate  
**CAS Number** 126-71-6

**Parchem - fine & specialty chemicals**  
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**New Rochelle, NY 10801**  
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Toll Free US & Canada: 1 (800) 255-3924  
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Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

**GHS Classification**

Skin sensitization, Category 1, H317  
Chronic aquatic toxicity, Category 3, H412

**GHS Label Elements**

**Pictograms:**



**Signal word:** WARNING

**Hazard and precautionary statements**

**Hazard Statements**

H317 May cause an allergic skin reaction  
H412 Harmful to aquatic life with long lasting effects

**Precautionary Statements**

P262 Do not get in eyes, on skin, or on clothing  
P273 Avoid release to the environment  
P280 Wear protective gloves  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water

**OSHA Hazards:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Other Hazards:** None known



Section 3. Composition / Information on Ingredients

**Common Name** Tri-Isobutyl Phosphate  
**Synonym(s)** Phosphoric acid, tris(2-methylpropyl) ester; Phosphoric acid, triisobutyl ester; TiBP  
**Formula**  $C_{12}H_{27}O_4P$   
**CAS Number** 126-71-6

COMPONENT	CAS NUMBER	CONCENTRATION
Tri-Isobutyl Phosphate	126-71-6	≥ 95% wt.

Section 4. First Aid Measures

**Eye Contact:** In case of contact, flush eyes with plenty of lukewarm water.

**Skin Contact:** In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention. Wash clothing and shoes before reuse.

**Inhalation:** If inhaled, remove to fresh air.

**Ingestion:** If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

Section 5. Firefighting Measures

**Suitable Extinguishing Media:** All extinguishing media are suitable.

**Special Fire Fighting Procedures:** Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize risk of rupture.

**Unusual Fire/Explosion Hazards:** Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

Section 6. Accidental Release Measures

**Spill and Leak Procedures:** Cleanup personnel must use appropriate personal protective equipment. Cover spill with inert material (e.g., dry sand or earth) and collect for proper disposal. Wash spill area with water. Collect wash water for approved disposal. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems.

Section 7. Handling and Storage

**Storage Temperature:** maximum: 50°C (122°F)

**Storage Period:** 24 Months: When stored in original sealed container.



**Handling/Storage Precautions:** Store in a dry place away from excessive heat. Avoid contact with skin or clothing. Wash thoroughly after handling. Keep container closed when not in use.

#### Section 8. Exposure Controls / Personal Protection

Country specific exposure limits have not been established or are not applicable

**Industrial Hygiene/Ventilation Measures:** Use local and general exhaust ventilation to control levels of exposure.

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

**Hand Protection:** Permeation resistant gloves.

**Eye Protection:** Safety glasses with side-shields.

**Skin and body protection:** Wear cloth work clothing including long pants and long-sleeved shirts.

**Additional Protective Measures:** Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

#### Section 9. Physical and Chemical Properties

**Form:** Liquid

**Color:** Colorless to light yellow

**Odor:** Characteristic

**pH:** approximately 8.5 @ 100 g/l

**Freezing Point:** < -60°C (< -76°F)

**Boiling Point/Range:** 272 °C (521.6°F) @ 1,013 mbar

**Flash Point:** 133°C (271.4°F)

**Lower Explosion Limit:** Not Established

**Upper Explosion Limit:** Not Established

**Vapor Pressure:** 50 mbar @ 170°C (338°F)

**Specific Gravity:** 0.965 @ 20°C (68°F)

**Solubility in Water:** Immiscible

**Solubility/Quantitative:** Solvents soluble

**Auto-ignition Temperature:** 430°C (806°F)

**Decomposition Temperature:** Not established

**Viscosity, Dynamic:** 5 mPa.s @ 20°C (68°F)

**Molecular Weight:** 266.3

#### Section 10. Stability and Reactivity

**Hazardous Reactions:** Hazardous polymerization does not occur.

**Stability:** Stable

**Hazardous decomposition products:** By Fire and Thermal Decomposition: Carbon Monoxide; Carbon Dioxide; oxides of phosphorus, other potentially toxic fumes

Section 11. Toxicological Information

**Toxicity Data for Triisobutyl Phosphate**

**Acute Oral Toxicity**

LD50: 5,000 mg/kg (Rat)

**Acute Inhalation Toxicity**

LC50: > 5.14 mg/l, 4 hrs (Rat)

**Acute dermal toxicity**

LD50: > 5,000 mg/kg (rabbit)

**Skin Irritation:** Rabbit, OECD Test Guideline 404, Non-irritating  
rabbit, Exposure Time: 4 h, Non-irritating

**Eye Irritation:** rabbit, Non-irritating

**Sensitization:** dermal: sensitizer (Guinea pig, Maximization Test (GPMT))

**Repeated Dose Toxicity:** 13 weeks, Oral: NOAEL: 68.4-84.3 mg/kg, (rat, Male/Female, ad libitum) Changes in blood parameters. Decreased feed consumption.

**Mutagenicity**

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Micronucleus Assay: negative (mouse, Male/Female, intraperitoneal)

**Developmental Toxicity/Teratogenicity**

Rat, Female, oral, daily, NOAEL (teratogenicity): > 1,000 mg/kg,

No Teratogenic effects observed at doses tested.

Section 12. Ecological Information

**Ecological Data for Triisobutyl Phosphate**

**Biodegradation**

Aerobic, 97 %, Exposure time: 14 Days

Zahn-Wellens Test, > 90 %, Exposure time: 28 d

**Biological Oxygen Demand (BOD):** 5 Days, < 2 mg/g

**Chemical Oxygen Demand (COD):** 944 mg/g

**Theoretical Biological Oxygen Demand (ThBOD):** < 0.002

**Acute and Prolonged Toxicity to Fish**

LC50: 23 mg/l (Rainbow (Donaldson) Trout (Oncorhynchus mykiss), 96 hrs)

**Acute Toxicity to Aquatic Invertebrates**

EC50: 11 mg/l (Water flea (Daphnia magna), 48 hrs)



### Toxicity to Aquatic Plants

EC50: 33 mg/l, End Point: biomass (Green algae (Scenedesmus subspicatus), 72 hrs)

### Toxicity to Microorganisms

EC50: 440 mg/l, (Pseudomonas putida, 30 min)

## 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

**Land transport (DOT):** Non-Regulated

**Sea transport (IMDG):** Non-Regulated

**Air transport (ICAO/IATA):** Non-Regulated

## Section 15. Regulatory Information

### United States Federal Regulations

**OSHA HazCom Standard Rating:** Hazardous

**US Toxic Substances Control Act:** Listed on the TSCA Inventory.

**US EPA CERCLA Hazardous Substances (40 CFR 302):** None

**SARA Section 311/312 Hazard Categories:** Acute Health Hazard

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**

**Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):** None

**US EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**

**Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:** None

### US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of

**Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):** If

discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

**State Right-To-Know Information:** The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.



**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

**Percentage:**  $\geq$  95% wt.

**Components:** Triisobutyl Phosphate

**CAS-No.:** 126-71-6

**New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:**

**Percentage:** 0.1 - 1% wt.

**Components:** Polar Organic Compound

**CAS-No.** N/A

**California Prop. 65:** To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or 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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