

Tri-*n*-butyl-d₂₇ Phosphate

Section 1. Chemical product and company identifications

Product code: D-5587

Chemical formula: C₁₂D₂₇O₄P

CAS: 61196-26-7

CAS (unlabelled): 126-73-8

Synonyms: Phosphoric Acid Tributyl Ester, Tributyl Phosphate

Supplier / Manufacturer:

C/D/N Isotopes Inc.

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In case of emergency:

TOXYSKAN HOTLINE: 1-855-780-0599

Section 2. Hazards identifications

GHS (Globally Harmonized System of Classification and Labelling of Chemicals):

- GHS Classification:**
- Acute toxicity, Oral (Category 4)
 - Acute toxicity, Inhalation (Category 4)
 - Skin irritation (Category 2)
 - Eye irritation (Category 2A)
 - Carcinogenicity (Category 2)

- GHS Label elements:**
- Pictograms: 
 - Signal word: Warning

- Hazards statement:**
- H302 + H332 Harmful if swallowed or inhaled.
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H351 Suspected of causing cancer.

- Precautionary statement:**
- P201 Obtain special instruction before use
 - P202 Do not handle until all safety precautions have been read and understood.
 - P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
 - P264 Wash hands thoroughly after handling.
 - P270 Do not eat, drink or smoke when using this product.
 - P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 - P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 - P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 - P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 - P337 + P313 If eye irritation persists: Get medical advice/ attention.
 - P362 + P364 Take off contaminated clothing and wash it before reuse.
 - P405 Store locked up.
 - P501 Dispose of contents/ container to an approved waste disposal plant

Section 3. Composition and information on ingredients

<u>Name</u>	<u>CAS</u>	<u>Concentration %</u>
Tri- <i>n</i> -butyl-d ₂₇ Phosphate	61196-26-7	> 98

Section 4. First aid measures

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact: Wash off with soap and plenty of water. Consult a physician.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Indication of immediate medical attention and special treatment needed, if necessary: No data available.

Most important symptoms and effects, both acute and delayed: No data available.

Section 5. Firefighting measures

Flammability of the product: Combustible at high temperature.

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, phosphorus oxides.

Firefighting media and instructions: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 6. Accidental release measures

Personal precautions: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Environmental precautions: Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7. Handling and storage

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation.

Storage: Store at room temperature. Adequate ventilation. Protect from moisture.

Section 8. Exposure Controls, Personal Protections

Engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

Eyes: Safety glasses with side-shields conforming to NIOSH (US) or EN 166 (EU).

Respiratory: 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).

Hands: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Skin/body: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9. Physical and chemical properties (unlabelled)

Molecular weight: 266.31 g/mol

Physical status: Liquid

Color: Colorless

Odour: Odorless

Density: 0.979 g/cm³

Melting point: -79 °C (-110 °F)

Boiling point: 289 °C (552 °F)

Vapour pressure: 0.008 hPa (0.006 mmHg) at 20 °C (68 °F)

Vapour density: 9.19 (Air = 1)

Partition coefficient (octanol/water): log Pow: 4

Water solubility: 0.28 g/L

Lower explosion limit: No data available.

Upper explosion limit: No data available.

Auto-ignition temperature: 400 °C (752 °F)

Flash point: 145 °C (293 °F)

Section 10. Stability and reactivity

Stability and reactivity: Stable under recommended storage conditions.

Incompatibility: Strong oxidizing agents, strong bases.

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, phosphorus oxides.

Reactivity conditions: No data available.

Section 11. Toxicological information (unlabelled)

Toxicological data: Tributyl Phosphate

Information on ingredients:

Name	CAS	LD₅₀	LC₅₀
Tributyl Phosphate	126-73-8	Oral - Rat - 1,390 mg/kg Dermal - Rabbit - > 3,100 mg/kg	Inhalation - Rat - 1 h - 28,000 mg/m ³

Potential acute effects

- **Eyes:** Causes serious eye irritation.
- **Skin:** Causes skin irritation.
- **Inhalation:** Harmful if inhaled.
- **Ingestion:** Harmful if swallowed.

Potential chronic effects

- **Carcinogenic effects:** This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Tributyl phosphate). 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.
- **Mutagenic effects:** No data available.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** No data available.

Section 12. Ecological information

Ecological data:

Name	Results	Species	Period
Tributyl Phosphate	4.5 mg/l LC50	Oryzias latipes	96 h
	1.8 mg/l EC50	Daphnia magna	48 h
	1.1 mg/l EC50	Desmodesmus subspicatus	72 h

Effects on environment: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Mobility: No data available.

Environmental precautions: No data available.

Persistence and degradability: Aerobic. Result: 92 % - Readily biodegradable. Method: OECD Test guideline 301D.

Bioaccumulative potential: Oryzias latipes - 38 d. Bioconcentration factor (BCF): 21 - 35.

Section 13. Disposal considerations

Waste disposal: Contact a licensed professional waste disposal service to dispose of this material.

Section 14. Transportation information

Classification DOT/IMDG/IATA label:

Shipping name: Not dangerous goods

UN number: None

Class: None

Packaging group: None

Additional information: None

Section 15. Regulatory information

UNITED STATES: NFPA classification



Health: 2
Flammable: 1
Reactivity: 0
Special conditions: None

Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous

U.S. Federal regulations:

California proposition 65 requirements : Not Listed
SARA section 313 (specific toxic chemical listings) : Not Listed
CERCLA reportable quantity : Not Listed
Sections 302-304 reportable quantity : Not listed
Community Right-to-Know (Sections 311 and 312) : Not Listed

Section 16. Additional information

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Elaborated by: Toxyscan Inc., 1-866-780-0599

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This safety data sheet has been prepared in accordance with the OSHA (USA), WHMIS (Canada) / GHS classification rules in effect at the time of writing.