

Section 1. Product and Company Identification

Product Name Tributyl Phosphate
CAS Number 126-73-8

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Section 2. Hazards Identification

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Carcinogenicity (Category 2), H351
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.
 P405 Store locked up.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS: None

Section 3. Composition / Information on Ingredients

Common Name Tributyl Phosphate
Formula $C_{12}H_{27}O_4P$
CAS Number 126-73-8

COMPONENT	CAS NUMBER	CONCENTRATION
Tributyl Phosphate	126-73-8	≤ 100%

Section 4. First Aid Measures

Description of first-aid measures

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

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

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

Eye contact: Flush eyes with water as a precaution.

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

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling and/or in section 11.

Indication of any immediate medical attention and special treatment needed: No data available

Section 5. Firefighting Measures

Extinguishing media

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



Special hazards arising from the substance or mixture: Carbon oxides, Oxides of phosphorus

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: No data available

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

Reference to other sections: For disposal see section 13.

Section 7. Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): Combustible liquids

Section 8. Exposure Controls / Personal Protection

Control parameters

Components with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Tributyl phosphate	126-73-8	TWA	0.200000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye & Upper Respiratory Tract irritation; Headache; Nausea Substances for which there is a Biological Exposure Index or Indices (see BEI section), see BEI for Acetylcholinesterase Inhibiting Pesticide		
		TAW	0.200000 ppm 2.500000 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	5.000000 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits



				for Air Contaminants
		TWA	5.00000 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		Upper respiratory Tract Irritation; Eye irritation; Bladder irritation 2014 Adoption Substances for which there is a Biological Exposure Index or Indices (see BEI section), see BEI for Acetylcholinesterase Inhibiting Pesticide Confirmed animal carcinogen with unknown relevance to humans		
		TWA	5 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Eye irritation; Bladder irritation Substances for which there is a Biological Exposure Index or Indices (see BEI section), see BEI for Acetylcholinesterase Inhibiting Pesticide Confirmed animal carcinogen with unknown relevance to humans		

Exposure controls

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

Personal protective equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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.

Body Protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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).

Control of environmental exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9. Physical and Chemical Properties

Form: Liquid

Color: Colorless



Odor: Odorless

Odor Threshold: No data available

pH: No data available

Melting point/range: -79°C (-110°F) - lit.

Initial boiling point and boiling range: 180 - 183°C (356 - 361°F) at 29 hPa (22 mmHg) - lit.

Flash point (Closed Cup): 145°C (293°F)

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: 36 hPa (27 mmHg) at 178°C (352°F)

Vapor pressure: 9.7 hPa (7.3 mmHg) at 150°C (302°F)

Vapor density: 9.19 - (Air = 1.0)

Relative density: 0.979 g/cm³ at 25°C (77°F)

Water solubility: Slightly soluble

Partition coefficient (n-Octanol/water): No data available

Auto-ignition temperature: > 482°C (> 900°F)

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

Other safety information

Surface tension: 25.1 mN/m at 20°C (68°F)

Relative vapor density: 9.19 - (Air = 1.0)

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available

Conditions to avoid: No data available

Incompatible materials: Strong oxidizing agents, Strong bases

Hazardous decomposition products

Other decomposition products: No data available

In the event of fire: see section 5

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female: 1,552 mg/kg

LC50 Inhalation - Rat - male and female: 4 h - > 4.242 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rabbit - > 3,100 mg/kg

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation - 24 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

in vivo assay - Guinea pig

Result: Did not cause sensitization on laboratory animals.

Germ cell mutagenicity

Chromosome aberration test in vitro

Chinese hamster ovary cells

Result: negative

Carcinogenicity

Carcinogenicity - Rat - Oral

Tumorigenic: Neoplastic by RTECS criteria. Kidney, Ureter, Bladder: Tumors.

Carcinogenicity - Mouse - Oral

Tumorigenic: Neoplastic by RTECS criteria. Liver: Tumors.

Limited evidence of carcinogenicity in animal studies

IARC: No component of this product, present at levels greater than or equal to 0.1%, is identified as probable, possible or confirmed human carcinogen by IARC.

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.

Reproductive toxicity

Reproductive toxicity - Rat - Oral

Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Developmental Toxicity - Rat - Oral

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available



Additional Information

RTECS: TC7700000

CNS stimulation. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Section 12. Ecological Information

Toxicity: Toxicity to fish semi-static test LC50 - *Oryzias latipes* - 17 mg/l - 96 h
(OECD Test Guideline 203)

Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 89 % - Readily biodegradable

Bioaccumulative potential: Bioaccumulation *Oryzias latipes* - 38 d - 93 µg/l

Bioconcentration factor (BCF): 21 - 35

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

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

DOT (US): Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

Section 15. Regulatory Information

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: Acute Health Hazard, Chronic Health Hazard

Massachusetts Right to Know Components

Tributyl phosphate (CAS-No. 126-73-8)

Revision Date: 1993-04-24



Pennsylvania Right to Know Components

Tributyl phosphate (CAS-No. 126-73-8)

Revision Date: 1993-04-24

New Jersey Right to Know Components

Tributyl phosphate (CAS-No. 126-73-8)

Revision Date: 1993-04-24

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.

HMIS Rating

Health: 2*

Flammability: 1

Reactivity: 0

NFPA Rating

Health: 2

Flammability: 1

Reactivity: 0

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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