



Section 1: Identification

PRODUCT AND COMPANY INFORMATION

Product Name: Tri-butoxyethyl phosphate **Molecular Formula:** C₁₈H₃₉O₇P
Catalog Number(s): P-186
Company: Scientific Polymer Products, Inc.
6265 Dean Parkway
Ontario, NY 14519
Telephone: 585/265-0413
Fax: 585/265-1390
Website: www.scipoly.com
Emergency Phone Number: 800-255-3924 (CHEM TEL)

Section 2: Hazards Identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Skin irritation (Category 2), H315
Eye irritation, Category 2A, H319
Specific target organ toxicity-single exposure (Category 3), Respiratory system, H335
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity, (Category 3), H412

GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)

H312+H332 Harmful in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well ventilated area.
P273 Avoid release into the environment.
P280 Wear eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P403+P233 Store in a well ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal plant.

To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.

Section 3: Composition/Information on Ingredients

Ingredient	CAS Number	Concentration (%)
Tri-butoxyethyl phosphate	78-51-3	100

Section 4: First Aid Measures

Description of first aid measures

General advice

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

If inhaled

If breathed in, move to fresh air environment. If not breathing, give artificial respiration. Contact a physician if breathing becomes difficult

In case of skin contact

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

In case of eye contact

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

If swallowed

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 (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire-Fighting Measures

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 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 and mist. Normal measures for preventive fire protection. For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well ventilated place.

Specific end use(s)

Laboratory chemicals, Manufacture of substances

Section 8: Exposure Controls/Personal Protection**Control parameters****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

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 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).

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**Information on basic physical and chemical properties**

a) Appearance Form: Liquid

b)	Odor	Butyl
c)	Odor Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	No data available
f)	Initial boiling point and boiling range	No data available
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Relative density	No data available
n)	Water solubility	0.11% (25°C)
o)	Partition coefficient: n- octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

Other safety information

No data available

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

Hazardous decomposition products formed under fire conditions- Carbon oxides, oxides of phosphorus
In the event of fire: see section 5

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

Oral: LD50-Rat-3,000 mg/kg
Inhalation: LC50-Rat-male and female- 4 h - > 6.4 mg/l
(OECD Test Guideline 403)
Dermal: Rabbit-male and female - >2,050 mg/kg

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Hamster-ovary Result: Negative
 Mutagenicity (micronucleus test)
 Mouse- male and female

Carcinogenicity

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.
 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.

Reproductive toxicity

No data available

Specific target organ toxicity- single exposure (GHS)

No data available

Specific target organ toxicity- repeated exposure (GHS)

No data available

Aspiration hazard

No data available

Additional Information

RTECS: KJ9800000

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

Section 12: Ecological Information

Toxicity

Toxicity to fish	semi-static test LC50-Oncorhynchus mykiss (rainbow trout)-24 mg/l- 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50-Daphnia magna (water flea)-53 mg/l – 48 h (OECD Test Guideline 202)
Toxicity to algae	static test- Pseudokirchneriella subcapitata (green algae)-61 mg/l-72 h (OECD Test Guideline 201)

Persistence and degradability

Biodegradability	aerobic- Exposure time 28 d (OECD Test Guideline 301B)
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Bioaccumulative potential

Bioaccumulation	Cyprinus carpio (Carp) -42 d
	Bioconcentration factor (BCF): <=5.8 (OECD Test Guideline 305C)

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 and disposal. Harmful to aquatic life.

Section 13: Disposal Considerations

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

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

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Tri-butoxyethyl phosphate	CAS-No. 78-51-3
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New Jersey Right To Know Components

Tri-butoxyethyl phosphate	CAS-No. 78-51-3
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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

HMIS Rating

Health:	2
Flammability:	1
Reactivity:	0

NFPA Rating

Health:	2
Flammability:	1
Reactivity:	0

This material is intended for laboratory use only. It is not sold or intended for drug, household or other uses. The information represents the most accurate and complete data currently available to us. However, we make no warranty, express or implied, with respect to such information, and we assume no liability resulting from its use.