

triethyl phosphate 78-40-0 MSDS

Name:	Triethyl Phosphate 99% Material Safety Data Sheet
Synonym:	Ethyl Phosphate; TE
CAS:	78-40-0

Section 1 - Chemical Product

MSDS Name: Triethyl Phosphate 99% Material Safety Data Sheet

Synonym: Ethyl Phosphate; TE

Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
78-40-0	TRIETHYL PHOSPHATE	99%	201-114-5

Hazard Symbols: XN

Risk Phrases: 22

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Harmful if swallowed.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation.

Ingestion:

May cause irritation of the digestive tract. May be harmful if swallowed. May inhibit cholinesterase activity, thereby producing nervous system effects.

Inhalation:

May cause respiratory tract irritation.

Chronic:

Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage. Chronic ingestion may cause neurological symptoms. Adverse reproductive effects have been reported in animals.

Section 4 - FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

Extinguishing Media:

Water or foam may cause frothing. Use water spray, dry chemical, carbon dioxide, or chemical foam. Use agent most appropriate to extinguish fire. Cool containers with flooding quantities of water until well after fire is out.

Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing.

Avoid ingestion and inhalation. Wash clothing before reuse.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits CAS# 78-40-0: Personal Protective Equipment Eyes: 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:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: colorless

Odor: Ester-like

pH: Not available.

Vapor Pressure: 1 mm Hg @ 20 deg C

Viscosity: mPas 20 deg C

Boiling Point: 215 deg C @ 760.00mm Hg

Freezing/Melting Point: -56 deg C

Autoignition Temperature: 480 deg C (896.00 deg F)

Flash Point: 130 deg C (266.00 deg F)

Explosion Limits, lower: 1.20 vol %

Explosion Limits, upper: 10.00 vol %

Decomposition Temperature:

Solubility in water: soluble in most other organic solvents

Specific Gravity/Density: 1.0720g/cm³

Molecular Formula: C₆H₁₅O₄P

Molecular Weight: 182.16

Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources, excess heat.

Incompatibilities with Other Materials:

Strong oxidizing agents - strong bases.

Hazardous Decomposition Products:

Carbon monoxide, oxides of phosphorus, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 78-40-0: TC7900000 LD50/LC50:

CAS# 78-40-0: Dermal, guinea pig: LD50 = >20 mL/kg; Draize test, rabbit, eye: 100 mg Moderate;
Oral, mouse: LD50 = 1180 mg/kg; Oral, rat: LD50 = 1165 mg/kg.

Carcinogenicity:

TRIETHYL PHOSPHATE - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

Section 12 - ECOLOGICAL INFORMATION

Other For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - TRANSPORT INFORMATION

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 22 Harmful if swallowed.

Safety Phrases:

S 25 Avoid contact with eyes.

WGK (Water Danger/Protection)

CAS# 78-40-0: 1

Canada

CAS# 78-40-0 is listed on Canada's DSL List.

CAS# 78-40-0 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 78-40-0 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

N/A
