

MATERIAL SAFETY DATA SHEET (MSDS)



Zhangjiagang Yaru Chemical Co., Ltd.

China phosphate ester flame retardant production and export manufacturers

Contact: ShaoJun(Sales) Tel:+86-0512-58961066 Fax: +86-0512-58961068 Mobile: +86-18921980669
MSN: yaruichem@hotmail.com Email : sales@yaruichem.com Skype: yaruichem@hotmail.com
Email: sales@yaruichem.com Website: www.yaruichem.com QQ:18921980669

Triethyl phosphate (cas 78-40-0) MSDS

MSDS : Triethyl Phosphate, 99%
CAS : 78-40-0
SYNONYMS : Ethyl Phosphate; TEP

Section 1 - Chemical Product and Company Identification

MSDS Name: Triethyl Phosphate, 99%
Catalog Numbers: AC139680000, AC139680010, AC139680025, AC139680050
Synonyms: Ethyl Phosphate; TEP
Company Identification:
Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300



Section 2 - Composition, Information on Ingredients

CAS #	Chemical Name	Percent	EINECS/ELINCS
78-40-0	triethyl phosphate	99%	201-114-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 20 max liquid.

Warning! Harmful if swallowed. May cause eye, skin, and respiratory tract irritation. May cause central nervous system effects. May cause adverse reproductive effects based upon animal studies.

Target Organs: Central nervous system, gastrointestinal system.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. May inhibit cholinesterase activity, thereby producing nervous system effects.

Inhalation: May cause respiratory tract irritation. May cause drowsiness, unconsciousness, and central nervous system depression. Harmful if inhaled.

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

Section 4 - First Aid Measures

Eyes: Immediately 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. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

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: Treat symptomatically and supportively.

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.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point: 111 deg C (231.80 deg F)

Autoignition Temperature: 480 deg C (896.00 deg F)

Explosion Limits, Lower: 1.2 vol %

Upper: 10 vol %

NFPA Rating: (estimated) Health: 1; Flammability: 1; Instability: 1

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. Provide ventilation.

Section 7 - Handling and Storage

Handling: Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Avoid breathing vapor or mist.

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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Triethyl Phosphate	none listed	none listed	none listed

OSHA Vacated PELs: Triethyl Phosphate: No OSHA Vacated PELs are listed for this chemical.

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

Appearance: colorless - APHA: 20 max

Odor: Ester-like

pH: Not available.

Vapor Pressure: 1 mm Hg @ 20 deg C

Vapor Density: 6.28 (air=1)

Evaporation Rate: Not available.

Viscosity: mPas 20 deg C

Boiling Point: 215 deg C @ 760.00mm Hg

Freezing/Melting Point: -56 deg C

Decomposition Temperature: Not available.

Solubility: 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, temperatures above 200°C.

Incompatibilities with Other Materials: Strong oxidizing agents - strong bases.

Hazardous Decomposition Products: Phosphine, carbon monoxide, oxides of phosphorus, carbon dioxide, phosphoric acid.

Hazardous Polymerization: Has not been reported

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;

Inhalation, rat: LC50 = 8.82 mg/L/4H

Carcinogenicity:

CAS# 78-40-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.

Mutagenicity: Mutation in microorganisms:

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Daphnia: Daphnia: EC50: 950 mg/L; 24H; DIN 38412 L11Fish: Leuciscus idus: LC50: 2140 mg/L; 48H; No data available.

Environmental: Terrestrial: Expected to have very high to high mobility in soil. Aquatic: Not expected to hydrolyze rapidly, unless the pH is above 11.

Atmospheric: Will exist primarily in the vapor phase in the ambient atmosphere. It will degrade by reaction with photochemically produced hydroxyl radicals with an estimated half-life of about 7.0 hours. Will biodegrade but not expected to bioconcentrate.

Physical: No information available.

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

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not Regulated.	Not Regulated.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

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

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 78-40-0: immediate.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 78-40-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

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 - DSL/NDSL

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

Canada - WHMIS

This product has a WHMIS classification of D2A, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 5/05/1999

Revision #4 Date: 6/28/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

