

Eastman(TM) Triethyl Phosphate

Customer PO: PO00105108

Version	Revision Date:	SDS Number:	Date of last issue: 10/22/2019
2.4	10/22/2021	150000001062	Date of first issue: 09/06/2016
PRD		SDSUS / Z8 / 0001	N43 / 0091466199 / 0004272709

SECTION 1. IDENTIFICATION

Product name : Eastman(TM) Triethyl Phosphate

Product code : P0041804

Manufacturer or supplier's details

Company name of supplier : Eastman Chemical Company

Address : 200 South Wilcox Drive
Kingsport TN 37660-5280

Telephone : (423) 229-2000

Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on useRecommended use : Chemical intermediate
Solvent
Plasticizer

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Acute toxicity (Oral) : Category 4

Eye irritation : Category 2A

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H302 Harmful if swallowed.
H319 Causes serious eye irritation.Precautionary Statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear eye protection/ face protection.

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Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Triethyl phosphate	78-40-0	>= 90 - <= 100

SECTION 4. FIRST AID MEASURES

If inhaled	: Move to fresh air. Treat symptomatically. If symptoms persist, call a physician.
In case of skin contact	: Wash off with soap and water. If symptoms persist, call a physician.
In case of eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.
If swallowed	: Seek medical advice.
Most important symptoms and effects, both acute and delayed	: Harmful if swallowed. Causes serious eye irritation.
Notes to physician	: Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Carbon dioxide (CO2) Dry chemical Water spray
Unsuitable extinguishing media	: Do NOT use water jet.

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Specific hazards during fire fighting : None known.

Hazardous combustion products : No hazardous combustion products are known

Further information : None known.

Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Wear appropriate personal protective equipment. Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions : Avoid release to the environment.

Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : None known.

Advice on safe handling : Do not get in eyes.
Do not swallow.
Wash thoroughly after handling.

Conditions for safe storage : Keep tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Triethyl phosphate	78-40-0	TWA	7.45 mg/m3	US WEEL

Engineering measures : Ensure adequate ventilation.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

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Hand protection

Remarks : Wear suitable gloves.

Eye protection

: Wear safety glasses with side shields (or goggles).
Face-shield
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Protective measures

: Remove respiratory and skin/eye protection only after vapors have been cleared from the area.
Ensure that eye flushing systems and safety showers are located close to the working place.
Use personal protective equipment as required.

Hygiene measures

: Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

: liquid

Color

: colorless

Odor

: mild

Odor Threshold

: not determined

pH

: not determined

Melting point/range

: -69.5 °F / -56.4 °C

Boiling point/boiling range

: 408 °F / 209 °C

Flash point

: 210 °F / 99 °C

Method: Pensky-Martens closed cup

Evaporation rate

: 4.54

Flammability (solid, gas)

: Not applicable

Self-ignition

: 441 °F / 227 °C
Method: ASTM D2155

846 °F / 452 °C

Upper explosion limit / Upper flammability limit

: 10. %(V)
(325 °F / 163 °C)

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Lower explosion limit / Lower flammability limit	:	1.7 %(V) (282 °F / 139 °C)
Vapor pressure	:	1.33 mbar (104 °F / 40 °C)
Relative vapor density	:	6.3
Relative density	:	1.07 (60.1 °F / 15.6 °C)
Solubility(ies) Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	not determined
Decomposition temperature	:	Method: DTA No exotherm to 500°C
Viscosity Viscosity, dynamic	:	1.76 mPa,s (68 °F / 20 °C) 0.82 mPa,s (160 °F / 71 °C)
Viscosity, kinematic	:	not determined
Explosive properties	:	Not classified
Oxidizing properties	:	Not classified

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Stable
Conditions to avoid	:	None known.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Carbon dioxide (CO ₂) Carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Harmful if swallowed.

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Acute oral toxicity : Remarks: Harmful if swallowed.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Components:**Triethyl phosphate:**Acute oral toxicity : LD50 Oral (Rat): 1,311 mg/kg
Assessment: Harmful if swallowed.Acute inhalation toxicity : LC50 (Rat): > 2050 ppm
Exposure time: 6 hAcute dermal toxicity : LD50 Dermal (Rat): > 2,000 mg/kg
Assessment: Not classified**Skin corrosion/irritation**

Not classified based on available information.

Product:

Remarks : No data available

Components:**Triethyl phosphate:**Species : Guinea pig
Exposure time : 24 h
Assessment : Not classified
Result : slight**Serious eye damage/eye irritation**

Causes serious eye irritation.

Product:

Remarks : Causes serious eye irritation.

Components:**Triethyl phosphate:**Species : Rabbit
Result : slight
Assessment : Causes serious eye irritation.**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

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Product:

Remarks : No data available

Components:**Triethyl phosphate:**

Test Type	: Skin Sensitization
Species	: Guinea pig
Assessment	: Not classified
Result	: non-sensitizing

Germ cell mutagenicity

Not classified based on available information.

Components:**Triethyl phosphate:**

Genotoxicity in vitro	: Test Type: Mutagenicity - Bacterial Metabolic activation: +/- activation Method: Bacterial Reverse Mutation Assay Result: negative
Genotoxicity in vivo	: Species: Mouse (male and female) Application Route: intraperitoneal injection Result: negative

Carcinogenicity

Not classified based on available information.

Components:**Triethyl phosphate:**

Remarks : This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**Reproductive toxicity**

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

Product:

Remarks : No data available

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N43 / 0091466199 / 0004272709**Components:****Triethyl phosphate:**

Assessment : Based on available data, the classification criteria are not met.

STOT-repeated exposure

Not classified based on available information.

Product:

Remarks : No data available

Repeated dose toxicity**Components:****Triethyl phosphate:**Species : Rat, male
NOAEL : 335 mg/kg
Exposure time : 120 dSpecies : Rat, female
NOAEL : 335 mg/kg
Exposure time : 150 d**Aspiration toxicity**

Not classified based on available information.

Product:

No data available

Components:**Triethyl phosphate:**

Not classified

Routes of exposure**Product:**

Inhalation : Remarks: None known.

Skin contact : Remarks: None known.

Eye contact : Remarks: Causes serious eye irritation.

Ingestion : Remarks: Harmful if swallowed.

Further information**Product:**

Remarks : None known.

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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Triethyl phosphate:**

Toxicity to fish	:	LC50 (golden orfe): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2,705 mg/l Exposure time: 24 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 31.6 mg/l Exposure time: 21 d

Persistence and degradability**Components:****Triethyl phosphate:**

Biodegradability	:	Result: Readily biodegradable.
Chemical Oxygen Demand (COD)	:	1.55 mg/g

Bioaccumulative potential**Components:****Triethyl phosphate:**

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 1.3 Exposure time: 42 d Concentration: < 0.1 mg/l Method: OECD Test Guideline 305
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Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues	:	Dispose of in accordance with local regulations.
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SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Product name	:	TRIETHYL PHOSPHATE
Pollution category	:	Z
Ship type	:	3

Domestic regulation**49 CFR**

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards	:	Acute toxicity (any route of exposure) Serious eye damage or eye irritation
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SARA 313	:	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.
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California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory

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ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

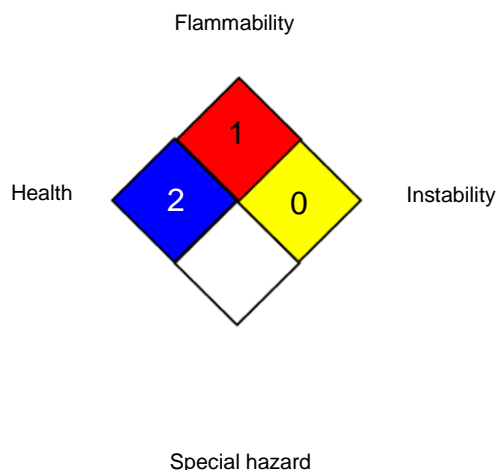
NZloC : On the inventory, or in compliance with the inventory

TECI : On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION**Further information****NFPA 704:****HMIS® IV:**

HEALTH	/	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)

US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Haz-

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ardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 10/22/2021

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8