

Material Safety Data Sheet Triethyl Phosphate

Section 1 - Product Identification

Synonyms : Triethyl Phosphate
Molecular Weight : 182.15 g/mol
Chemical Formula : C₆H₁₅O₄P
Company Identification : Tradeasia International Pte. Limited
Address : 133 Cecil Street # 12-03 Keck Seng Tower, Singapore
Tel: +65-6227 6365
Fax: +65-6225 6286
Email: contact@chemtradeasia.com

Recommended use of the chemical and restrictions on use

The product is used in:

- Manufacturing, Chemicals
- Process Regulators

Section 2 – Composition/Information on Ingredients

The product contains 100 percent (%) Phosphorus Trichloride

Chemical Name	CAS No	Purity, %
Triethyl Phosphate	78-40-0	100

Section 3 – Hazards Identification

3.1 Emergency Overview

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

3.2 Other hazards

Swallowed

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Eye

Wash face, hands and any exposed skin thoroughly after handling

Skin

Wash face, hands and any exposed skin thoroughly after handling

Inhaled

Corrosive and irritating to the upper and lower respiratory tract and all mucosal tissue. Symptoms include lacrimation, cough, labored breathing, and excessive salivary and sputum formation. Excessive irritation causes chemical pneumonitis and pulmonary edema which could be fatal.

Chronic Health Effects

No information is available

Section 4 – First-Aid Measures

4.1. Description of first aid measures

Skin contact

Wash off immediately with plenty of water. Get medical attention if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion

Not specified. Seek immediate medical attention.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically

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. Substance is noncombustible. Contact with water can cause violent liberation of heat and splattering of the material. Vapors may be heavier than air.

They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

5.1. Suitable Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

5.3. Special protective actions for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

5.4 Flash Point

111 °C / 231.8 °F

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing

6.2. Environmental precautions

Avoid release to the environment. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up

Small Spill

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal

Large Spill

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal

Section 7 – Handling and Storage

7.1. Precautions for safe Handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3 Ventilation

NA

Section 8 – Exposure Controls/Personal Protection

8.1. Control parameters

Component	CAS-No.	Value	Control parameters	Basis
Triethyl phosphate	78-40-0	TWA	7.450000 mg/m3	USA. Workplace Environmental Exposure Levels (WEEL)
		TWA	7.45 mg/m3	USA. Workplace Environmental Exposure Levels (WEEL)

8.2. Appropriate engineering controls

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

8.3. Individual protection measures, such as personal protective equipment (PPE)

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).

Eyes and hands 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.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Refers to TDS provided

Section 10 – Stability and Reactivity

10.1. Conditions Contribute to Instability

Stable under normal conditions.

10.2 Storage Incompatibility

Strong bases, Strong oxidizing agents

10.3 Conditions to Avoid

No data available

10.4 Materials to Avoid

Strong bases

Section 11 – Toxicological Information

11.1. Information on toxicological effect

NA

11.1.1. Substances

Acute toxicity⁽²⁾

LD50 Oral - Rat - 1,165 mg/kg

Remarks: Brain and Coverings:Recordings from specific areas of CNS. Behavioral:Somnolence (general depressed

activity). Behavioral:Ataxia.

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available
Germ cell mutagenicity
No data available

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

STOT-single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

STOT-repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration Hazard

Shall not be classified as presenting an aspiration hazard.

Section 12 – Ecological Information

12.1.Toxicity

NA

12.2. Persistence and degradability

NA

12.3. Bioaccumulative potential

Data are not available.

12.4. Mobility in soil

Data are not available.

12.5. Other adverse effects

Data are not available.

Section 13 – Disposal Considerations

13.1. Disposal methods

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

Section 14 – Transport Information

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T+ C

Risk Phrases:

R 14 Reacts violently with water.

R 26/28 Very toxic by inhalation and if swallowed.

R 29 Contact with water liberates toxic gas.

R 35 Causes severe burns.

R 48/20 Harmful : danger of serious damage to health by prolonged exposure through inhalation.

Safety Phrases:

S 7/8 Keep container tightly closed and dry.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7719-12-2: 1

Canada

CAS# 7719-12-2 is listed on Canada's DSL List.

CAS# 7719-12-2 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 7719-12-2 is listed on the TSCA inventory.

Section 16 : Additional Information

16.1. Mainly changes made to the previous version of this Material Safety Data Sheet (MSDS):

- This MSDS complies with ISO 11014; the requirements of UN-GHS

Revision No	Revision content
05	• This SDS is updated in accordance with the GHS (Rev.6) (2015)-Guidance on the Compilation of Safety data Sheets.

16.2. List of abbreviation and acronyms used in this MSDS

SDS : Safety Data Sheets

Index N° : atomic number of the element most characteristic of the properties of the substance

CAS No : Chemical Abstracts Service number

EC No : EINECS Number : European Inventory of Existing Commercial Substances

Repr. Cat. 2 : Substance presumed human reproductive toxicant

Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.

GHS : Globally Harmonised System of Classification and Labelling

LD₅₀ : Median Lethal Dose

LC₅₀ : Lethal Concentration, 50%

N.A. : Not Applicable

OSHA : Occupational Safety & Health Administration

Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)

PEL : Permissible Exposure Limits

ACGIH : American Conference of Governmental Industrial Hygienists

TLV : Threshold Limit Value

Japanese MITI : Japanese Ministry of International Trade and Industry

EC₅₀ : Half maximal effective concentration

UN : United Nations

U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the authority of the Environmental Protection Agency

Canadian DSL: Canadian Domestic Substances List

16.3. List of relevant hazard statements and precautionary statements used in this MSDS

Hazard Statement

H361 d: Suspected of damaging the unborn child

H319: Causes serious eye irritation

H303: May be harmful if swallowed

Precautionary Statements

Prevention

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P281: Use personal protective equipment as required.

P264: Wash eyes thoroughly after handling.

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P308 + P313: If exposed or concerned: get medical advice/attention.

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.

Storage

P405: Store locked up.

Disposal

P501: Dispose of contents/container to in accordance with local regulations.

16.4. References

16.5. Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.