

MATERIAL SAFETY DATA SHEET

According to the UN GHS 9th rev. edition

Trimethyl Phosphate

Version 1.0

Printing date: 11-02-2022

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SDS Record Number: CSSS-TCO-010-150285

SECTION 1: Identification

GHS Product identifier: Trimethyl Phosphate

Other means of identification: See section 3

Recommended use of the chemical and restrictions on use

Recommended use: Methylating agent for nitrogen heterocyclic compounds. It's used as a color inhibitor for fibers (e.g. polyester) and other polymers.

Recommended restrictions: Not available

Supplier's details:

Supplier(Manufacturer): Zhangjiagang Fortune Chemical Co., Ltd

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SECTION 2: Hazard identification

Classification of the substance or mixture:

Physical hazards: Not classified

Health hazards: Acute toxicity, oral Category 4

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 2

Germ cell mutagenicity Category 1B

Carcinogenicity Category 2

Environmental hazards: Not classified

GHS label elements:

Hazard Pictograms :



Signal word: Danger

Hazard statement(s): Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause genetic defects (oral).

Suspected of causing cancer (oral).

Precautionary statement(s):

Prevention: Obtain, read and follow all safety instructions before use.

Wash hands thoroughly after handling. Do not touch eyes.

Do not eat, drink or smoke when using this product.

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response: IF SWALLOWED: Get medical help.

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.
IF exposed or concerned, get medical advice.
Rinse mouth.
If skin irritation occurs: Get medical help.
If eye irritation persists: Get medical help.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local regulations.

Storage:
Disposal:
Other hazards which do not result in classification:

SECTION 3: Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	CAS No.	Concentration (%) w/w
Trimethyl Phosphate	512-56-1	99.5

SECTION 4: First-aid measures

Description of necessary first-aid measures:

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin: Remove all contaminated clothing immediately. Wash skin with soap and plenty of water. Consult a physician.

Eye: Flush eyes with water as a precaution.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed:

Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause genetic defects (oral). Suspected of causing cancer (oral).

Indication of immediate medical attention and special treatment needed, if necessary:

Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: Avoid using water jet to extinguish the fire which may cause fire spread.

Specific hazards arising from the chemical: Carbon oxides, Oxides of phosphorus.

Special protective actions for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary. Avoid skin contact by maintaining a safe distance or wearing suitable protective clothing.

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.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling:	Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, including any incompatibilities:	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

Control parameters:	Not available.
Appropriate engineering controls:	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. Provide eyewash station.
Individual protection measures:	
Eye/face protection:	Face shield and safety glasses. 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.
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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Material: butyl rubber. Minimum layer thickness: 0,7 mm. Break through time: > 480 min. Splash protection: Material: Nature latex. Minimum layer thickness: 0,6 mm. Break through time: > 30 min. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Hand protection:	Where risk assessment shows air-purifying respirators are appropriate use a Filter A-(P3).
Respiratory protection:	
Thermal protection:	Wear protective clothes if necessary

SECTION 9: Physical and chemical properties and safety characteristics

Basic physical and chemical properties

Physical state:	Liquid
Colour:	Colorless and transparent
Odour:	Slight
Odor threshold:	Not available
Melting point/Freezing point:	Not available
Boiling point or initial boiling point and boiling range:	Not available
Flammability(gases, liquids and solids):	Non flammable
Lower and upper explosion limit/flammability limit	Not available
Flash point:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available

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pH:	Not available
Kinematic viscosity	Not available
Solubility (H₂O) :	Not available
Partition coefficient n-octanol/water:	Not available
Vapor pressure:	Not available
Density and/or relative density:	1.21
Relative vapour density:	Not available
Particle characteristics(solids):	Not available

SECTION 10: Stability and reactivity

Reactivity:	On intense heating, explosive mixtures with air are possible.
Chemical stability:	Material is stable under normal conditions
Possibility of hazardous reactions:	Exothermic reaction with Oxidizing agents, acids. Development of hazardous gases or vapors with Hydrides, strong reducing agents.
Conditions to avoid:	Strong heating.
Incompatible materials:	Strong acids, bases and oxidizing agents.
Hazardous decomposition products:	Carbon oxides and phosphorus oxides.

SECTION 11: Toxicological information

Acute toxicity:	
LD50(Oral, Rat):	840 mg/kg bw
LD50(Dermal, Rabbit):	Not available.
LC50(Inhalation, Rat):	Not available.
Skin corrosion/Irritation:	Causes skin irritation.
Serious eye damage/irritation:	Causes serious eye irritation.
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	May cause genetic defects (oral).
Carcinogenicity:	Suspected of causing cancer (oral).
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

SECTION 12: Ecological information

Toxicity:	
Acute:	
LC50(fish, 96h):	>= 1 050 mg/L
EC50(Daphnia, 48h):	Not available.
EC50(algae, 72h):	>= 1 000 mg/L
Chronic:	
NOEC(fish):	Not available.
NOEC(Daphnia):	320 mg/L, 21d
EC50(algae):	Not available.
Persistence and degradability:	Not available.
Bioaccumulative potential:	No data available.
Mobility in soil:	No data available.
Other adverse effects:	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

Disposal methods: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

ADR

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing group	Not regulated

IATA

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing group	Not regulated

IMDG

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing group	Not regulated

Environmental hazards

Marine pollutant No

EmS Not regulated

RID

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
Transport hazard class(es)	Not regulated
Packing group	Not regulated

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

ADR; IATA; IMDG; RID Not regulated

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No information available

15. Regulatory information

Inventory status:

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AIIC)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes

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Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Indication of changes: Version 1.0 Amended by GHS rev 9

Abbreviations and acronyms: ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation for rail International transportation of Dangerous goods

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: Code international maritime dangerous goods code

ICAO: International Civil Aviation Organization

IATA: International Air Transport Association

LC50: median lethal concentration

EC50: The effective concentration of substance that causes 50% of the maximum response

NOEC: No Observed Effect Concentration

DNEL: derived no-effect level

PNEC: predicted no-effect concentration

Notice to reader: Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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