GHS Safety Data Sheet

Section 1. Identification of the substance or mixture and of the supplier Product Information

Product name: PO(OCH₃)₃ Trimethyl phosphate (TMOP)

Product number:	Purity	Form
PPR01LB	99.999%(5N)	liquid
_	99.9999%(6N)~99.99999%(8N)	liquid

Company Information:

Manufacturer: Kojundo Chemical Laboratory Co., Ltd.

1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284

Phone: +81-49-284-1511 Fax: +81-49-284-1351

Emergency Phone: +81-49-284-1511

Recommended uses and restrictions on use: For research purposes

Section 2. Hazards identification

GHS Classification

Health Hazards	Environmental Hazards	Physical Hazards
Acute toxicity(oral); Category 4 Acute toxicity (dermal); Not classified Skin corrosion/irritation; Category 2 Serious eye damage/eye irritation; Category 2B Germ cell mutagenicity; Category 1 Reproductive toxicity; Category 2 Specific target organ toxicity, single exposure; Category 2 Specific target organ toxicity, repeated exposure; Category 2	Hazardous to the aquatic environment, acute hazard; Not classified Hazardous to the aquatic environment, long-term hazard; Not classified	Flammable Liquid: Not classified Substances and mixtures which, in contact with water, emit flammable gases: Not classified

GHS Label:





Pictograms or symbols:

Warning word: DANGER			
Hazard information	Description of precaution		
Harmful if swallowed Causes skin irritation Causes eye irritation May cause genetic defects Suspected of damaging fertility or the unborn child May cause damage to organs (nervous system) May cause damage to organs through prolonged or repeated exposure (nervous system, kidney)	Obtain special instructions. Read and understand all safety precautions before handling. Wear protective gloves/protective clothing/eye protection/respiratory protection/face protection during handling. Avoid breathing dust/mist/gas/fume/vapor/spray. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling. Take off the contaminated clothing and wash before reuse. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		



IF ON SKIN: Remove immediately all contaminated clothing and rinse skin with water/shower. Then wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. Store locked up.

Dispose of contents/ container in accordance with local/national regulations.

Section 3. Composition / information on ingredients

Chemical or common name: Trimethyl phosphate

Chemical formula: PO(OCH₃)₃
Single Substance or Compound: Single substance

 Composition:
 100%

 CAS #:
 512-56-1

 RTECS#:
 TC8225000

 TSCA inventory:
 Listed

 EINECS:
 2081448

Section 4. First aid measures

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids.

Continue to rinse for at least 15 minutes and get medical attention.

Skin contact: Promptly flush contaminated skin with soap or mild detergent and water.

Contact physician if irritation continues.

Inhalation: Remove the exposed person immediately and provide fresh air.

Get medical attention.

Ingestion: Rinse mouth and throat with water. Get medical attention immediately.

Section 5. Fire fighting measures

Extinguishing media: Use media appropriate for surrounding fire.

Dry chemical powder, Alcohol resistance foam, Carbon dioxide, Dry sand.

DO NOT use a direct water stream.

Fire fighting: The product cannot catch fire.

Self-contained breathing apparatus and full protective clothing should be

used, if the material is involved in fire. In case of fire, may liberate toxic gases/ fume.

Reacts with water and hydrolyzes to produce methanol.

Remove containers to safe place if possible.

Use water spray to Cool down nearby structures and containers.

Section 6. Accidental release measures

Personal Precautions:

Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts.

Environmental hazard precautions:

Shut off leak if without risk.

Prevent flow out to river, etc. so as not to badly affect.

Method for containment and cleaning up:

Indoor leakage: Ventilate as much as possible until the cleaning is completed. Outdoor leakage: Work from the windward and evacuate the leeward crowd. Gather up, pack in closed DOT-approved waste container as much as possible.

Carefully collect remnant and move to a safe place.



Section 7. Handling and storage

Precautions to be taken in handling:

Safe handling: Handle the material in a dry inert gas atmosphere, utilizing glove bag or

glove box.

Keep away from moisture when handling.

Keep container or bottle tightly closed when not in use.

Avoid prolonged or repeated exposure.

Handling worker wears suitable protective clothing. Keep away from heat, sparks and naked flame.

Precautions to be taken in storage:

General precautions: Store the material in a sealed container.

Store in a cool, dry, well ventilated and dark place away from incompatible

materials.

Keep in a dry inert gas.

Keep away from any heat, sparks, and flames.

Section 8. Exposure controls / personal protection

Exposure guideline: ACGIH(2024), OSHA(2006) : No data available

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent

inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles,

impervious gloves, protective wear, protective boots etc.

Section 9. Physical and chemical properties

Color and Form: Colorless liquid Chemical formula: $PO(OCH_3)_3$

Formula weight: 140.1

Melting point: α ; -46.1 °C, β ; -62.5 °C

Boiling point: $197.2 \,^{\circ}\text{C}$

Solubility in water: Soluble(Slightly hydrolysis)

Soluble in: Acids.

Flammability: Flammable substance but not easily ignited.

Oxidation: None

Section 10. Stability and reactivity

Stability: Stable in closed container under room temperature.

May decompose on exposure to air and moisture.

Reactivity

Condition to avoid: Heat, water and moisture.

Incompatibility: Strong oxidizing agents, strong bases.

Section 11. Toxicological information

Acute toxicity(Oral): GHS: Category 4; Harmful if swallowed.

Rat $LD_{50} = 840 \text{ mg/kg (SIDS(1996))}$

Acute toxicity(Dermal): GHS; Not classified

Rabbit LD₅₀ = 2830 mg/kg (PATTY 5th(2001))

Skin corrosive / irritation: GHS: Category 2; Causes skin irritation. Serious eye damage / irritation: GHS: Category 2B; Causes eye irritation.

Respiratory sensitization: GHS: No data available



Skin sensitization: GHS: No data available

Germ cell mutagenicity: GHS: Category 1B; May cause genetic defects.

Carcinogenicity: GHS: No data available

Reproductive toxicity: GHS: Category 2; Suspected of damaging fertility or the unborn

child.

Specific target organ toxicity

-single exposure: GHS: Category 2; May cause damage to organs. (nervous system)

-repeated exposure: GHS: Category 2; May cause damage to organs through

prolonged or repeated exposure. (nervous system, kidney)

Aspiration hazard: GHS: No data available

Section 12. Ecological information

Ecotoxicity:

Hazardous to the aquatic environment

-short-term (acute) hazard: GHS: Not classified

Acute toxicity is not reported at 100 mg/L for algae, crustacea,

and fish (SIDS, 2005).

-long-term (chronic) hazard: GHS: Not classifiedHazardous to the ozone layer GHS: No data available

No Freon or Halon

Fish toxicity: See above

Degradability: Not readily degradable(J-CHECK)
Bioaccumulative potential: Low bioconcentration(J-CHECK)

Mobility in soil: No data available

Section 13. Disposal considerations

Disposal method: User of the product should contract with the local government or licensed

'Industrial Waste Haulers' for disposal of waste.

Section 14. Transport information

UN classification: Non-hazards

UN number: None
HS code: 2919.90
Marine pollution: None

Precautions: Container should be transported in a secure position, in a well-ventilated

vehicle.

Section 15. Regulatory information

TSCA inventory: Listed.

Please refer to any other local / national measures that may be relevant.

Section 16. Other information

This SDS is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product. Some new information or amendments may be added afterwards.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.

