

SAFETY DATA SHEET**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****1.1 Identification of the product**

Product Description TRIMETHYL PHOSPHITE

Pure Substance/preparation Substance

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended use Used primarily as an intermediate in the manufacture of pesticides.
It is also used as a fireproofing agent in the production of textile.
Intermediate in the production of flame-retardant polymers for polyurethane foam.
Catalyst

Uses advised against No uses advised against has been identified.

1.3 Details of the Supplier of the Safety Data Sheet**Supplier**

UPL Limited,
UNIT 1
Plot # 117-18,
GIDC Estate, NH 8,
Ankaleshwar, Gujrat 393002

Telephone +91-(02646) 250 279

E-mail address info.in@uniphos.com

1.4 Emergency Telephone Number

Emergency number Chemtrec: (800) 424-9300 (24hr) or (703) 527-3887
Medical: Rocky mountain Poison Control Center
(866) 673-6671 (24hr)

2. Hazard Identification**2.1 Classification of the substance or Mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquid	Category 3 - (H226)
Acute Toxicity Oral	Category 4 - (H302)
Skin Corrosion/Irritation	Category 2 - (H315)
Eye Damage/Irritation	Category 2A - (H319)
Reproductive Toxicity	Category 2 - (H371)
STOT-Single Exposure	Category 3 - (H335)
STOT-Repeated Exposure	Category 2 - (H373)

2.2 Label elements

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Signal Word

WARNING

Hazard Statement

H226	Flammable liquid and vapour
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye damage
H371	Suspected of causing damage to fertility or unborn child
H335	May cause respiratory tract irritation
H373	May cause damage to (central nervous system, lungs, eyes) through prolonged or repeated exposure

Precautionary Statements

Prevention

- P210 - Keep away from heat/sparks/open flames/hot surfaces.
- P233 - Keep container tightly closed.
- P240 - Ground/Bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting/.../equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P264 - Wash ... thoroughly after handling.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/eye protection/face protection

Response

- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P370+P378 - In case of fire: Use Dry chemical, Dry powder.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P301+P310 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P330 Rinse mouth.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P321 Specific treatment (see ... on this label)
- P332+P313 If skin irritation occurs: Get medical advice attention.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- 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.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P391 Collect spillage.

Storage

- P403+P235+P233 Store in a well-ventilated place. Keep cool. Keep container tightly closed.
- P405 Store locked up.

Disposal

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

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Other Hazard Information

Reacts violently with water

2.3 Other hazards

The substance does not meet the criteria for a PBT or vPvB substance

3. Composition/information on Ingredients

Chemical name	CAS-No	EC No	Weight %	EU - GHS Substance Classification (REGULATION (EC) No 1272/2008)	Reach No.
Trimethyl Phosphite	121-45-9	204-471-5	90-100	Flam. Liq. 3; Acute Tox.4; Skin Irrit. 2; Eye Dam. 2; Repr. Tox. 2;STOT SE 3; STOT RE 2; H226, H302, H315,H319,H371,H335,H373	No data available

For the full text of the H-Statements mentioned in this Section, see Section 16

4. First aid measures**4.1 Description of first-aid measures****General advice**

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

Eye contact

IF IN EYES: Rinse cautiously with water for 15-30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If you feel unwell call a POISON CENTER or doctor/ physician.

Skin contact

Wash off with soap and plenty of water for at least 15-30 minutes. Clean contaminated clothing and shoes before reuse or discard if they cannot be thoroughly cleaned. If skin irritation or rash develops, get medical attention.

Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth. Do not induce vomiting unless told by physician. If vomiting occurs ensure patient can breathe. Get Immediate medical attention.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed

Treat symptomatically and supportively.

5. Fire-fighting measures

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5.1 Extinguishing media**Suitable extinguishing media** Dry chemical, Dry Powder**Unsuitable extinguishing media** Do not use water**5.2 Special hazards arising from the substance or mixture****Special Hazard** Thermal decomposition can lead to release of toxic/irritant gases.
Hazardous decomposition products formed under fire conditions:
Carbon oxide, Phosphorus oxide**5.3 Advice for Firefighters**

Wear self-contained breathing apparatus and protective suit. In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of involved material.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Keep away from heat/sparks/open flames/hot surfaces. Ground/Bond container and receiving equipment. Use personal protective equipment. Use explosion-proof electrical/ventilating/lighting/.../equipment. Take precautionary measures against static discharge. Do not breathe dust/vapor/spray/mist. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Wear suitable protective equipment (See section 8).

6.2 Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage carefully, Cover spill with dry extinguishant. Contain spill with absorbent. Sweep up and place in approved transport container. Store in suitable, correctly labeled closed container for disposal.

6.4 Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

7. Handling and Storage**7.1 Precautions for Safe Handling****7.1.1 Handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Wear full face protection and gloves. Use only non-sparking tools. Keep container tightly closed. Store locked up. Store in cool, dry place in tightly closed container. Ensure good ventilation/exhaustion at the workplace.

7.1.2 Hygiene measures

Wash thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and flame. Store away from water & air.
Incompatible with oxidizing agents, bases, metal salts, Peroxides

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7.3 Specific end uses

Laboratory chemical, Manufacture of substance

8. Exposure Controls/ Personal Protection

8.1 Control Parameters

Exposure Limits Apply technical measures to comply with the occupational exposure limits.

Chemical name	ACGIH TLV	OSHA PEL
Trimethyl phosphite	TWA: 2 ppm	(vacated) TWA: 2 ppm (vacated) TWA: 10 mg/m ³

Derived No Effect level (DNEL) No information available

Predicted No Effect Concentration No information available

8.2 Exposure Controls

Appropriate Engineering Control Ensure adequate ventilation, especially in confined areas. If applicable, use process enclosure, local exhaust ventilation, or other engineering controls to maintain airborne level below recommended exposure limits. If exposure limits have not been established maintain airborne levels to acceptable level.

Personal protective equipment

Eye protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(US) or EN 166(EU)
Skin protection	Long-sleeved clothing. Preventative skin protection is recommended.
Hand protection	Wear suitable protective glove/clothing. 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.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

Environmental exposure controls Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Colorless liquid with pungent odor
Physical state	Liquid
Color	Colorless
Odor	Pungent
Odor threshold	0.1 ppb

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	No information available	
Melting point/freezing point	-78°C	
Boiling Point/Range	111-112°C	
Flash Point	27°C/81°C	
Evaporation rate	No information available	
flammability (solid, gas)	No information available	
Flammability or explosive limits	No information available	
Upper	No information available	

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Lower	No information available
Relative Density	1.052 g/cm ³
Vapor Density	4.3 (air = 1)
Vapor pressure (air = 1)	28 hPa
Water solubility	Insoluble
Solubility in Other Solvents	Soluble in hexane, benzene, acetone, carbon tetrachloride and kerosens
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Oxidizing properties	No information available
Explosive properties	No information available
Surface Tension	No information available

10. Stability and Reactivity

10.1 Reactivity

Reacts violently with water.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reaction

Reacts with water, oxidizing agents.

10.4 Conditions to avoid

Keep away from ignition source.

10.5 Incompatible Materials

Water/moisture, oxidizing agents and bases, Metal salts, peroxides

10.6 Hazardous Decomposition Products

Thermal decomposition can lead to release of toxic/irritant gases.

Hazardous decomposition products formed under fire conditions: Carbon oxides, Phosphorus oxides

11. Toxicological Information

11. 1 Information on Toxicological Effects

Acute toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Trimethyl Phosphite	1600 mg/kg (Source- HSDB)	2600 MG/KG (Source - HSDB)	No information available

Local effect

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Inhalation	No information available.
Eye contact	Causes serious eye irritation
Skin contact	Causes skin irritation
Ingestion	Harmful if swallowed
<u>Chronic toxicity</u>	
Skin Corrosion/Irritation	Causes skin irritation.
Eye damage/irritation	Causes serious eye irritation.
sensitization	Based on available data, the classification criteria are not met.
Mutagenic effects	Based on available data, the classification criteria are not met.
Carcinogenic effects	Based on available data, the classification criteria are not met.
Reproductive effects	Suspected of damaging fertility or unborn child.
STOT - Single Exposure	May cause respiratory tract irritation.
STOT - repeated exposure	May cause damage to (nervous system, lungs, eyes) through prolonged or repeated exposure.
Aspiration hazard	Based on available data, the classification criteria are not met.

12. Ecological Information

12.1 Ecotoxicity

No information available

12.2 Persistence and Degradability

No information available

12.3 Bioaccumulative Potential

No information available

12.4 Mobility in Soil

No information available

12.5 Results of PBT and vPvB Assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other Adverse Effects

No other adverse effects identified.

13. Disposal Considerations

13.1 Waste Treatment Methods

Waste from Residues / Unused Products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse empty containers. Dispose of this container to hazardous or special waste collection point.

14. Transport Information

ADR/RID

14.1 UN-No	UN2329
14.2 Proper Shipping name	TRIMETHYL PHOSPHITE
14.3 Hazard class	3

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14.4 Packing group III
14.5 Environmental Hazard No

IMDG/IMO

14.1 UN-No UN2329
14.2 Proper Shipping name TRIMETHYL PHOSPHITE
14.3 Hazard class 3
14.4 Packing group III
14.5 EMS-No F-E,S-D
14.6 Environmental Hazard No

IATA/ICAO

14.1 UN-No UN2329
14.2 Proper Shipping name TRIMETHYL PHOSPHITE
14.3 Hazard class 3
14.4 Packing group III
14.5 Environmental Hazard No

15. Regulatory Information**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture****International Inventories**

TSCA Complies
EINECS/ ELINCS Complies

DSL/NDSL Complies
PICCS Complies
ENCS Complies
China Complies
AICS Complies
KECL Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

16. Other Information

Full text of H-Statements referred to under sections 2 and 3.

H226 Flammable liquid and vapour.
H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
H371 Suspected of causing damage to fertility or unborn child
H335 May cause respiratory tract irritation
H373 May cause damage to (nervous system, lungs, eyes) through prolonged or repeated exposure

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Revision Note Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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End of Safety Data Sheet