

Material Safety Data Sheet

Tris (hydroxymethyl) phosphine oxide (THPO)

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1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification

Corporate MSDS Number: THPO CAS Number: 1067-12-5
Product Name: THPO EINECS No.: 213-924-6
Chemical Formula: (CH₂OH)₃PO
Chemical Name: Tris(hydroxymethyl) phosphine oxide; phosphinylidynetrimethanol; Methanol, 1,1',1"-phosphinylidynetris-.
Product Use: Flame retardant, intermediate, lubricant.

Company Identification

MANUFACTURER/DISTRIBUTOR: Cosutin Industrial CO., Limited
Add: Unit B, 10/F Lee May Building 788-790 Nathan Road, Mongkok, Kowloon, H.K.
Tel.: +852 21395855 Fax: +852 81673777
PHONE NUMBERS Product Information: +86 136 31481545
Transport Emergency: +86 136 31481545
Medical Emergency: +86 136 31481545

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS No.	Typical Wt. %
Tris (hydroxymethyl) phosphine oxide	1067-12-5	100%

3. HAZARDS IDENTIFICATION

Acute Health Effects

Harmful if ingested or inhaled. Minimize exposure to this material. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Chronic Health Effects

CARCINOGENIC EFFECTS : Not available.

MUTAGENIC EFFECTS : Not available.

Effects on newborn- Behavioral.

4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye Contact: Irrigate eyes with a certain amount of water or physiological saline. If there are persistent symptoms, obtain medical advice.

Skin Contact: Immediately wash affected skin with plenty of water. Take off contaminated clothing, wrist watch, jewellery. Wash clothes before re-use.

Inhalation: Remove to fresh air; seek medicinal attention if symptoms persist. If the victim is not breathing, perform artificial respiration. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered.

Ingestion: Immediately offer water to drink. Never give anything by mouth to an unconscious person.

Do not induce vomiting unless directed by medical personnel. If symptoms occur, get medical attention.

5. FIRE FIGHTING MEASURES

Flammability: Non flammable.

Auto-Ignition: Not available.

Flash Points: 259.2°C(498.56F) .

Flammable Limits: Not available.

Combustion Products: Carbon monoxide (CO), phosphorus oxides (PXOY).

Fire Hazards: No specific information is available regarding the flammability of this compound in the presence of various materials.

Unusual fire and explosion hazards: NA

Fire Fighting Media and Instructions

Water, powder carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for firefighting if necessary.

Equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions: Stop leak if possible. Pick up small spills with absorbent materials and dispose of properly. Recover large spills for salvage or disposal.

Methods for Cleaning up: Wash hard surfaces with safety solvent or detergent to remove remaining oil film. Greasy nature will result in a slippery surface.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Handle with caution and minimize exposure. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection. Keep away from heat and sources of ignition. Mechanical exhaust required.

Do not puncture, drag, or slide this container.

Drum is not a pressure vessel; never use pressure to empty.

Storage: 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.

Store in closed containers between 68 F and 77 F .
Keep away from humid conditions, oxidizing agents, and excessive heat.
Store and use in well ventilated areas.
Do not store or use near heat, spark or flame, store out of sun

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protective Equipment

Hand 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.

Eye/face Protection: Safety glasses, goggles, or face shield recommended to protect eyes from mists or splashing.

Skin Protection: PVC coated gloves recommended to prevent skin contact.

Respiratory Protection: If vapors or mists are generated, wear an authorization approved organic vapor/ mist respirator.

General Hygiene Considerations: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Employees must practice good personal hygiene, washing exposed areas of skin several times daily and laundering contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: clear, liquid

Colour: Pale yellow or colorless

pH: 6-8

Melting point: N/A

Boiling point: 504.9°C at 760 mmHg

Flash point: 259.2 °C

Ignition temperature: N/A

Lower explosion limit: no data available

Upper explosion limit: no data available

Density: 1.42~1.45 g/cm³ at 20 °C

Viscosity (mPa · s ,20°C) 3500~4000

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions. And hazardous polymerization will not occur.

Conditions to Avoid: Avoid excessive heat and light and Humid conditions.

Incompatible Materials: Strong oxidizing agents, Strong bases

Hazardous Decomposition Products: Combustion produces carbon monoxide, carbon dioxide and phosphorus oxides along with smoke.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: No adverse effects expected, however, large amounts may cause nausea and vomiting.

Eye contact: An eye irritant.

Skin contact: No skin irritation but long contact may cause dermatitis.

Inhalation: Material may be irritant to the mucous membranes of the respiratory tract (airways).

Long Term Effects: No information available for the product.

Toxicological Data: No information available for the product.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways.

Aquatic toxicity: NA

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated Packaging: Dispose of in accordance with local regulations. Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORTATION INFORMATION

DOT

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-Hazardous for Air Transport.

IMO

Non-Hazardous for sea Transport: Non-Hazardous for sea Transport.

ADR/RID Class: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

UN Name: None

Packaging Requirements: The product can be shipped in all modes of transportation. Suggested Packaging is plastic bucket.

15. REGULATORY INFORMATION

Chemical Safety Management of Dangerous Goods Regulations (issued by State Department on 17 Feb 1987) and Chemical Safety Management of Dangerous Goods Regulations Ordinance have been issued against safe using, production, storage, transportation, loading the hazardous chemical goods. In the 6.1 section of Dangerous Chemical Common Use Classification and Signs, it has been categorized as one of the non-poisonous commodities.

16. OTHER INFORMATION

Revision Information

Revision Data

7 Sep 2016

Revision Number 3

Supersedes Revision Dated

4-Jan-2016

Disclaimer:

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End of MSDS