

MATERIAL SAFETY DATA SHEET

TRIPHENYL PHOSPHITE - TPP

1. Chemical Product and Company Identification

Product Name : Tri Phenyl Phosphite - TPP
Manufacturer : **S M Chemicals**
Address : S M Chemicals
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INDIA
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2. Composition, Information on Ingredients

INGREDIENT	OSHA HAZARDS	LD50
Triphenyl Phosphite FORMULA: C ₁₈ H ₁₅ O ₃ P CAS: 101-02-0 RTECS # TH1575000 EINECS/ELINCS NUMBER: 202-908-4 EC CLASSIFICATION: Irritant; Dangerous for the Environment EC LABEL: Xi, Irritant; N, Dangerous for the Environment EC R: R36/38: R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment EC S: S28: After contact with skin, wash immediately with plenty of water S60: This material and its container must be disposed of as hazardous waste S61: Avoid release to the environment. Refer to special instructions/Safety data sheet	Physical Hazards : No. Health Hazard: Irritant, Severe, Skin Irritant, Eye Possible chronic. effects	Rat: Acute Oral; LD50; 1.6 g/kg

3. Hazards Identification

EMERGENCY OVERVIEW

Clear, liquid, with phenolic odor Avoid eye and skin contact. Avoid repeated or prolonged inhalation. Avoid contact with strong oxidizers and reducers, acid and moisture. Material can slowly hydrolyze in the presence of water. Protect against decomposition products of oxides of carbon, oxides of phosphorus, hydrocarbon fragments, phenolics, phosphorous acid, phosphite/phosphate esters, phosphine.

HMIS RATING: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 1 PPE: B

ROUTE OF ENTRY

Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion
Yes	YES	Yes	Yes	Yes

HEALTH EFFECTS

Exposure Limits Yes	Irritant Yes	Sensitization No
Teratogen No	Reproductive Hazard No	Mutagen No

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POTENTIAL HEALTH EFFECTS:

EYE: Causes irritation.

SKIN: Causes irritation, severe irritation or rash possible. May cause skin defatting.

INGESTION: Low hazard in normal industrial use. If ingested, material can be acutely toxic. Small amounts ingested can cause gastrointestinal disturbance, diarrhea.

INHALATION: Low hazard in normal industrial use. Repeated or prolonged inhalation of vapor or mist may be harmful or cause irritation

CHRONIC EFFECTS: Not listed as human carcinogen by OSHA, IARC, or NTP.

NEUROLOGICAL EFFECTS: Low hazard in normal industrial use. Absorption of this material through skin or ingestion may result in neurotoxic effects. Persons with certain types of neurological diseases, such as MS, should consult with a physician prior to exposure to this material.

SIGNS AND SYMPTOMS: Eye, skin or respiratory tract irritation. Gastrointestinal disturbance, diarrhea

4. First Aid Measures

EYE: Hold eyelid open; flush with large volume of water; continue for 20-30 minutes. If irritation develops, seek medical attention.

SKIN: Wash area with mild soap and water. If irritation develops, seek medical attention.

INGESTION: If swallowed, do not induce vomiting, unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention

INHALATION: Remove to fresh air. If irritation develops or if exposed to excessive levels of vapor or mist, seek medical attention.

NOTE TO PHYSICIANS: Treat symptomatically. (See Section 3 For Observable Signs/Symptoms).

5. Fire Fighting Measures

FLAMMABLE PROPERTIES: Flash Point: 295° F (146°C) Method: PMCC Burn Rate: Not determined

FLAMMABLE LIMITS: Lower flammable limit: Not determined, Upper flammable limit: Not determined

FLAMMABILITY CLASSIFICATION: OSHA IIIB

AUTOIGNITION TEMPERATURE: Not determined

HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon, oxides of phosphorus, hydrocarbon fragments, phenolics, phosphorous acid, phosphite/phosphate esters, phosphine.

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, foam. Water spray can be used for surrounding containers.

ADDITIONAL CONSIDERATIONS: Material sensitive to static discharge. Do not use high pressure water jet as extinguishing media. Material can slowly hydrolyze in the presence of water, releasing toxic vapor or gas. Water and foam can cause frothing.

FIRE FIGHTING INSTRUCTIONS: Protect against decomposition products, wear self contained breathing apparatus. If this material is involved in a fire, keep surrounding containers cool with water spray and contain all runoff.

NFPA 704M RATING: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 1 SPECIAL: -

6. Accidental Release Measures

Wear protective equipment (see Section 8). Isolate the area and deny entry to unnecessary and unprotected personnel. Stop the leak at the source; dike area and/or take measures to prevent material from entering waterway. Prevent contact with strong oxidizers and reducers (see Section 7.) Pump or shovel material to reclaim container; vacuum remaining material into disposal container (see Section 13.)

7. Handling and Storage

HANDLING: Do not wear contaminated clothing. Wash prior to eating, drinking, smoking, or use of restroom and when leaving work. Heating of non-vented container may cause container to rupture. Do not dispose of material or empty container to the environment. Use proper grounding procedures. Prevent static charge when handling.

STORAGE: Do not store near heat or open flame.

INCOMPATIBLE MATERIALS: Strong oxidizers and reducers, acids, and moisture

VENTILATION: Local exhaust, unless heating to vapor or mist

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SPECIAL PACKAGING MATERIALS: Material should be stored in manufacturer's supplied packaging or container. Use of other packaging or container should be approved by qualified personnel.

SPECIFIC USE: This product is marketed and sold as a processing component for primary use as polymer stabilizer. Use of this material in other processes should be approved by qualified personnel.

8. Exposure Controls, Personal Protection

EXPOSURE GUIDELINES and LIMIT VALUES:

Exposure Limits for this product have not been established. Avoid repeated or prolonged exposure to vapor or mist without appropriate respiratory protection (see section 8.2.1)

EXPOSURE CONTROLS:

OCCUPATIONAL EXPOSURE CONTROLS:

Engineering Controls: Mechanical ventilation if heated to vapor or mist..

Respiratory Protection: Not required for normal conditions of use. If exposure to vapor or mist can occur the use of an air purifying respirator with organic vapor cartridge is required.

Hand Protection: Impervious gloves.

Eye \Face Protection: Chemical goggles or face shield

Skin Protection: Long sleeve shirt and long pants

General Hygiene: Facility should be equipped with safety shower and eye wash in area. Do not wear contaminated clothing. Wash prior to eating, drinking, smoking, or use of restroom and when leaving work.

ENVIRONMENTAL EXPOSURE CONTROLS: Control the release of this product to the environment. See Section 6 for accidental release measures and Section 13 when disposing of the material.

9. Physical and Chemical Properties

PHYSICAL STATE: Clear Liquid

ODOR: Phenolic

pH: Not determined

BOILING POINT: 401° F (205° C) 5 mm Hg

FLASH POINT: 295° F (146 °C)

FLAMMABILITY (SOLID/GAS): Non-flammable liquid

EXPLOSIVE PROPERTIES: Not determined

OXIDIZING PROPERTIES: Not an oxidizer

VAPOR PRESSURE: 5 mm Hg @ 205° C

VAPOR DENSITY: 10.7 (air = 1)

RELATIVE DENSITY: 1.18 @ RT

SOLUBILITY: Insoluble (Water)

PARTITION COEFFICIENT: N-OCTANOL/WATER: Not determined

VISCOSITY: Not determined

EVAPORATION RATE: <1 (butyl acetate = 1)

FREEZING/MELTING POINT: Not determined

10. Stability and Reactivity

CHEMICAL STABILITY: Stable under normal ambient and anticipated storage and handling conditions

CONDITIONS TO AVOID: Avoid heating to decomposition. Material can hydrolyze in the presence of water, producing phosphorous acid and phenol.

MATERIALS TO AVOID(INCOMPATIBILITY): Strong oxidizing and reducing agents, acids, moisture, water.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, oxides of phosphorus, hydrocarbon fragments, phenolics, phosphorous acid, phosphite/phosphate esters, phosphine

HAZARDOUS POLYMERIZATION: Not known to occur.

11. Toxicological Information

EYE EFFECTS: Rabbit: Draize 24H; 500 mg, mild irritant. Direct contact may cause severe irritation. Repeated or prolonged contact may cause conjunctivitis.

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SKIN EFFECTS: Human: Driaze 48H; 125 mg, severe irritant, Rabbit: Mouse: Acute Dermal; LD50; 5000 mg/kg
Direct contact with liquid or mist may cause dermal drying and irritation, possibly severe. Triphenyl Phosphite diluted 1:3 with cold cream produced mild irritation in two thirds of persons tested after 48 hours.

INGESTION EFFECTS: Rat: Acute Oral; LD50; 1.6 g/kg. Acute exposure in animal studies produced tremors, diarrhea and vasodilation. If sufficient amounts are absorbed toxic neuropathy may develop.

INHALATION EFFECTS: Rat: LC; >6700 mg/m³/1H. Mammal: TClO; 9mg/m³/4H/45D-I; Blood: change in WBC, RBC, weight loss or decreased gain

12. Ecological Information

ECOTOXICITY: Goldfish: 96 hour; LC50; 700 ug/l. Material considered highly toxic.

ENVIRONMENTAL FATE :

Mobility: No data

Persistence And Degradability: Medaka; BCF 96 hour; 250-500 ug/l, Oryzias latipes; BCF 96hour; 250 ug/l

Bioaccumulative Potential: No data

OTHER ADVERSE EFFECTS: Product is not known to deplete the ozone.

13. Disposal Considerations

Because product uses, mixtures, processes, or contamination may render this material hazardous, it is the responsibility of the user/owner of the product to determine at the time of disposal, whether the product meets RCRA criteria for a hazardous waste. Dispose of this material and the empty containers, liners and rinsate according to current local, state, federal and/or international regulations.

USEPA: Solid and Hazardous Waste Classification and Listing: 000102-02-0

261.20: Not a listed constituent. Material should be evaluated for Toxicity Characteristic prior to disposal.

261.31: Not Listed 261.32: Not Listed 261.33 Table 1: Not Listed Table 2: Not Listed

261. App. VII: Not Listed 261.App. VIII: Not Listed

14. Transport Information

DOT SHIPPING NAME: Material as sold is not a DOT hazardous material.

IMO CLASSIFICATION: Class 9, UN3082 Environmentally hazardous substance, liquid, n.o.s. (Triphenyl phosphite), Category A

IATA CLASSIFICATION: Not determined

ADR CLASSIFICATION: Class 9, F., 11 (c), 3082 Environmentally hazardous substance, liquid, n.o.s. (Triphenyl phosphite)

15. Regulatory Information



Symbol

16. Other Information

This information is based on our present state of knowledge. It should not therefore be constructed as guaranteeing specific properties of this product or their suitability for a particular application.