

MATERIAL SAFETY DATA SHEET

Tris-(2.4-di-t-butylphenyl)- phosphite

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Tris-(2.4-di-t-butylphenyl)- phosphite

CAS Number: 31570-04-4

Producer/Supplier :SHANGHAI DEBORN CO., LTD.

ADD: RM604,NO,233,RUSHAN ROAD,PUDONG, SHANGHAI, CHINA

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2. HAZARDS IDENTIFICATION

WHMIS Designation: This product is not WHMIS controlled.

Potential Health Effects: This product is not expected to cause skin or eye irritation.

Primary Route(s) of Entry: Ingestion, Skin, Inhalation, Eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

NON-HAZARDOUS COMPONENTS

Components CAS Number Weight %

Physical Form: Solid

Color: White to Off-white

EMERGENCY OVERVIEW

Odor: None

Health: This product presents little or no immediate hazard to people if spilled or released..

SignalWord:

Physical Hazards: Refer to MSDS Section 7 for Dust Explosion information. NOTICE!

Environmental: This product is moderately toxic to aquatic organisms. Prevent spillage or leakage to a body of water.

4. FIRST AID MEASURES

Eyes: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin: Wash off immediately with soap and plenty of water. Get medical attention if irritation occurs.

Inhalation: Remove to fresh air, if not breathing give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.

Ingestion: Do not induce vomiting. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration. Seek medical attention immediately.

Notes to physician: None known.

5. FIRE FIGHTING MEASURES

Fire Fighting Measures: Standard procedure for chemical fires.

Suitable Extinguishing Media: Carbon dioxide, dry chemical, foam or water mist.

Fire Fighting Equipment: Wear self-contained breathing apparatus and protective suit.

Unusual hazards: The product can form an explosive dust/air mixture. For further information, see Section 7 Explosion Hazards.

Hazardous Combustion

Products: Burning may produce toxic combustion products.

6. ACCIDENTAL RELEASE MEASURES

Cleanup Instructions: Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Wear suitable protective equipment. Should not be released into the environment.

7. HANDLING AND STORAGE

Handling: As with all industrial chemicals, use good industrial practices when handling. Avoid eye, skin, and clothing contact. Do not inhale. Do not taste or swallow. Use only with adequate ventilation.

Storage: Keep containers tightly closed in a cool, well-ventilated place.

Explosion Hazards: - Combustible powder.

- Avoid creating dusty conditions.
- Grounding is required when emptying into a conductive container.
- When flammable solvents are present, the container must be inerted or the system otherwise designed to prevent or contain an explosion. Seek expert advice. In addition, for products packaged in fused-lined (coated) fiber drums, fiber drums with conductive liners, steel drums, steel pails, and Type "C" FIBC (bulk bags), or other conductive the following instructions also apply:
 - Always ground this package before emptying. The user is responsible for designing the system to handle solid and ensuring proper training of employees in the system's use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protective Equipment

Eye/Face Protection: Wear safety glasses or goggles to protect against dust particles.

Skin Protection: Wear chemical resistant gloves and protective clothing.

Respiratory Protection: Use NIOSH approved respirator as needed to mitigate exposure.

Engineering Controls: Work in well ventilated areas. Do not breathe dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Solid

Color: White to Off-white

Odor: None

Boiling Point: Not applicable

Freezing/Melting Point: 181 - 186° C (358 - 367° F)

Solubility in water: < 1 ppm@ 20 oC

Vapor Density: Not applicable

Vapor Pressure: ~ 1 x 10(-10) mmHg@20oC (68oF)



Density: Not determined

Specific Gravity: 1 - 1.05 (Water = 1)

pH: Not applicable

Percent Volatile: < 0.5

MSDS date: 21-Jun-2004 **Product Name:** JXANOX-168

VOC: Not determined

Partition Coefficient (Octanol/Water): > 6 log Pow

Decomposition Temperature: ~ 320° C (608 ° F)

Ignition Temperature: 380° C (716° F) BAM (fluidized dust method)

Flammability Limits in Air:

Flash point: > 150° C (302° F)

Test Method (for Flash Point): Open cup

10. STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Avoid static discharge.

Incompatibility: Strong oxidizing agents, strong acids, strong bases.

Hazardous Decomposition

Products: No decomposition expected under normal storage conditions.

Possibility of Hazardous

Reactions: None expected.

11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity: (Rats) (Mice) (Chinese hamster) LD50 > 6000 mg/kg

Acute Dermal Toxicity: (Rats) LD50 > 2000 mg/kg

Acute Inhalation Toxicity: Not determined

Intraperitoneal: LD50: > 2000 mg/kg (Rats)

Eye Irritation: (Rabbits) Not an irritant

Skin Irritation: (Rabbits) Not an irritant.

Skin Sensitization: (Guinea pigs) Not a sensitizer in the optimization test

Carcinogenicity (IARC; NTP; OSHA; ACGIH):

None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

Carcinogenicity Studies: Groups of CD rats were fed diets for 104 weeks containing an equivalent intake of 0, 17.8, 53.4 and 147 mg/kg/day. No treatment-related effects or increased tumor incidences were seen. The NOEL was at least 147 mg/kg/day.

Mutagenicity: Ames test: Non-mutagenic study (spermatogonia / spermatocytes, male mouse):

Nonmutagenic cerevisiae MP-1:Non-mutagenic study in somatic cells (Chinese hamster):

Non-mutagenic chromatid exchange (Chinese hamster): Non-mutagenic anomaly test (Chinese hamster):

Non-mutagenic lethal test (Mice): No evidence of a dominant-lethal effect at any of the mating periods tested.

Reproductive Toxicity: 2-Generation Reproductive Study (Rats):Male and female albino rats received a diet containing 0, 114, 285.7 and 714mg/kg/day. All doses were well tolerated with respect to general toxic effects. The

high dose caused a slight reduction of the fertility rate in F0 parental animals. However, this observation was not seen in the F1 parents, implying that it may have occurred just by chance and was not treatment related. No other parameters were adversely affected. The no-observable effect level (NOEL) was 285.7 mg/kg/day.

Teratogenicity: Teratogenicity (Rabbits): No embryotoxic or teratogenic effects observed for dose levels of 0, 200, 600, and 1,200 mg/kg given by gavage on gestation days 6-18.

Neurotoxicity: White leghorn hen - No signs of neurotoxicity.

Subacute Toxicity: Not determined

Subchronic Toxicity: 3-Month Toxicity Study (Rats): The NOEL was 500 mg/day. Relative and absolute kidney weights of the females increased in the higher dose group, which persisted until the end of the recovery period. Month Dietary Toxicity Study (Dogs):The NOEL was at least 318 mg/kg/day. No test substance related changes were observed.

Chronic toxicity: Not determined

Absorption / Distribution /

Excretion / Metabolism:Not determined

Additional Information: Cholinesterase inhibition in vitro: No inhibition at a concentration of 10 ppm.

12. ECOLOGICAL INFORMATION

Toxicity to Fish: LC50 4.05 ppm 96-hour, (Zebra fish) LC50: 42 ppm 96-hour, (Golden orfe) LC50: 49 ppm 96-hour, (Rainbow trout) LC50: 66 ppm 96 hour (Carp) LC50: 70 ppm 96-hour, (Catfish) LC50: 84 ppm 96-hour, (Bluegill) LC50 100 mg/l; NOEC = 100 mg/l

Toxicity to Invertebrates: EC50: 510 ppm 24 hour (Daphnia magna)

Toxicity to Algae: > 75.2 ppm EC50 72 hour (Green algae)

Toxicity to Sewage Bacteria: Inhibitory concentration on respiration of aerobic waste water bacteria: IC20, IC50,IC80 >100 ppm

Activated Sludge Respiration

Inhibition Test: Not determined

Biochemical Oxygen Demand

(BOD):Not determined

Chemical Oxygen Demand

(COD):Not determined

Total Oxygen Demand (TOD): Not determined

Biodegradability: Degradability in modified Sturm test: Not biodegradable, with 3-6% in 28 days.

Bioaccumulation: Japanese (MITI) bioaccumulation study, carp: Not bioaccumulative at test concentrations of 1.0 and 0.15 ppm.

Additional Environmental Data: Not determined

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with local, state, provincial and federal regulations.

14. TRANSPORT INFORMATION

Transportation of Dangerous Goods (TDG):

Not regulated for this mode of transport.

International Maritime Dangerous Goods (IMDG):



Not regulated for this mode of transport.

International Air Transportation Authority (IATA):

Not regulated for this mode of transport.

15. REGULATORY INFORMATION

Federal Regulations

Workplace Hazardous Materials Information System (WHMIS): This product is not WHMIS controlled.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Domestic Substance List (DSL) Status: All components are listed on the DSL.

International Regulations

TSCA Section 8(b) Inventory Status: All component(s) comprising this product are either exempt or listed on the TSCA inventory.

Chemical Weapons Convention (CWC): This product does not contain any component(s) listed under the Chemical Weapons Convention Schedule of Chemicals.

16. OTHER INFORMATION

Disclaimer: The information contained herein is based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to such data or information. The user is responsible for determining whether the product is suitable for its intended conditions of use.