

Material Safety Data Sheet

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Version 1.1

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

| | |
|-------------------|---|
| Product Name | TRIS(2-(DIPHENYLPHOSPHINO)ETHYL)PHOSPHIN E, 97% |
| Product Number | 327697 |
| Company | Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765 Australia |
| Technical Phone # | +61 2 9841 0555 |
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| Emergency Phone # | +61 2 9841 0566 |

2 - Composition/Information on Ingredients

| Product Name | CAS # | EC no | Annex I Index Number |
|--|------------|-----------|-------------------------|
| TRIS(2-(DIPHENYLPHOSPHINO)ETHYL)PH OSPHINE, 97% | 23582-03-8 | 245-754-3 | None |
| Formula | C42H42P4 | | |
| Molecular Weight | 670.7 AMU | | |

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Harmful by inhalation, in contact with skin and if swallowed.
Irritating to eyes, respiratory system and skin.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing.

STORAGE

Conditions of Storage: Keep tightly closed. Store in a cool dry place.

SPECIAL REQUIREMENTS: Air sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

| | | |
|----------------------|--------------|----------------------------|
| Appearance | N/A | |
| Property | Value | At Temperature or Pressure |
| pH | N/A | |
| BP/BP Range | N/A | |
| MP/MP Range | 134 - 135 °C | |
| Flash Point | N/A | |
| Flammability | N/A | |
| Autoignition Temp | N/A | |
| Oxidizing Properties | N/A | |

| | |
|-----------------------|-----|
| Explosive Properties | N/A |
| Explosion Limits | N/A |
| Vapor Pressure | N/A |
| SG/Density | N/A |
| Partition Coefficient | N/A |
| Viscosity | N/A |
| Vapor Density | N/A |
| Saturated Vapor Conc. | N/A |
| Evaporation Rate | N/A |
| Bulk Density | N/A |
| Decomposition Temp. | N/A |
| Solvent Content | N/A |
| Water Content | N/A |
| Surface Tension | N/A |
| Conductivity | N/A |
| Miscellaneous Data | N/A |
| Solubility | N/A |

10 - Stability and Reactivity

STABILITY

Conditions to Avoid: Air.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine.

11 - Toxicological Information

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Inhalation: Material is irritating to mucous membranes and upper respiratory tract.

Multiple Routes: May be harmful by inhalation, ingestion, or skin absorption. Causes eye and skin irritation.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2811

Class: 6.1

PG: III

Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811
Class: 6.1
PG: III
Proper Shipping Name: Toxic solid, organic, n.o.s.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2811
Class: 6.1
PG: III
Proper Shipping Name: Toxic solid, organic, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xn

Harmful.

R-PHRASES: 20/21/22 36/37/38

Harmful by inhalation, in contact with skin and if swallowed.

Irritating to eyes, respiratory system and skin.

S-PHRASES: 26 37/39

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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