

Material Safety Data Sheet

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Version 1.4

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	TRIBUTYLTIN HYDRIDE, 97%
Product Number	234788
Company	Sigma-Aldrich Pty. Ltd. 12 Anella Avenue Castle Hill NSW 2154 Australia
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number	
TRI-N-BUTYLTIN HYDRIDE	688-73-3	211-704-4	050-008-00-3	
Ingredient Name	Percent	CAS #	EC no	Annex I
Stabilized with:		None	None	None
Formula	C12H28Sn			
Molecular Weight	291.05 AMU			
Synonyms	Stannane, tributyl- (8CI,9CI) * Tin, tri-n-butyl-, hydride * Tributylstannane * Tributylstannic hydride * Tributyltin * Tributyltin hydride * Tri-n-butyltin hydride			

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Harmful in contact with skin. Toxic if swallowed. Irritating to eyes and skin. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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 skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

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

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Sand or dry powder type agents specially designed for metal powder fires.

Unsuitable: Do not use water.

SPECIAL RISKS

Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions. Vapor may travel considerable distance to source of ignition and flash back. Water reactive material.

Explosion Hazards: Material readily reacts with water generating flammable and/or explosive hydrogen gas Vapor may travel considerable distance to source of ignition and flash back.

Container explosion may occur 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

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Store under inert gas. Keep tightly closed. Keep away from heat, sparks, and open flame.

Incompatible Materials: Do not allow contact with water

Store at 2-8°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood. Use nonsparking tools.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Remove and wash contaminated clothing promptly. Discard contaminated shoes.

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	0.1 mg/m3

Remarks: SKIN

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	0.05 mg/m3
		0.002 ppm

Remarks: 4

Remarks: H,Y

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	TWA	0.1MG (SN) /M3
OEL	STEL	0.2 mg (Sn) /m3

Remarks: Skin

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	Physical State: Clear liquid Color: Colorless	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	80 °C	0.4 mmHg
MP/MP Range	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	1.098 g/cm3	
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

Reactions to Avoid: Contact with metal causes the substance to

decompose to the dimer causing an increase in pressure due to the formation of hydrogen gas which may result in an explosion.

Conditions to Avoid: Moisture. Air.

Materials to Avoid: Reacts violently with water., Steel, Strong oxidizing agents Avoid contact with metals.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Tin/tin oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: WH8675000

SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Gastrointestinal disturbances. Nausea, vomiting, diarrhea. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: Harmful if absorbed through skin.

Eye Contact: Causes eye irritation.

Inhalation: May be toxic by inhalation. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: Toxic if swallowed.

TARGET ORGAN INFORMATION

Central nervous system.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. 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#: 1993

Class: 3

PG: III

Proper Shipping Name: Flammable liquid, n.o.s.

IMDG

UN#: 1993

Class: 3
PG: III
Proper Shipping Name: Flammable liquid, n.o.s.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 1993
Class: 3
PG: III
Proper Shipping Name: Flammable liquid, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 050-008-00-3

NOTA: A

INDICATION OF DANGER: T-N

Toxic. Dangerous for the environment.

R-PHRASES: 21-25-36/38-48/23/25-50/53

Harmful in contact with skin. Toxic if swallowed. Irritating to eyes and skin. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-PHRASES: 35-36/37/39-45-60-61

This material and its container must be disposed of in a safe way. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

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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