

# MATERIAL SAFETY DATA SHEET



## Asahi Pure Tin Anode Ball Sn99.99

MSDS #: AM2-1/6

Date of Preparation: May, 2002

### SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

#### 1.1 Product Details:

Product Name : Pure Tin Anode Ball

Trade Name : Asahi Pure Tin Anode Ball Sn99.99

Use : Anodes are used for electroplating purposes.

#### 1.2 Company's Identification:

Manufacturer's Name and Address : Singapore Asahi Chemical & Solder  
Industries Pte Ltd  
47 Pandan Road  
Singapore 609288

Telephone : (65) 6262-1616

Facsimile : (65) 6261-6311

#### 1.3 Contact Point:

Designation : Chemist

Emergency Telephone Number: (65) 6262-1616

### SECTION 2: COMPOSITION/INFORMATION ON MATERIAL

Chemical Name	CAS No.	%	OSHA PEL(mg/m <sup>3</sup> )	ACGIH TLY (mg/m <sup>3</sup> )	Other Limits Recommended
Tin (Sn)	7440-31-5	99.99	2.0	2.0	
Others		0.01			
<b>Total</b>		<b>100</b>			

### SECTION 3: HAZARD IDENTIFICATION

Class of Hazards Chemicals :

Effect of Acute (severe short term) Exposure: Acute toxicity of pure tin is low.

INHALATION : Long term inhalation of tin or insoluble tin compounds may cause tin dust lungs (stannosis).

SKIN CONTACT : No data was available.

EYE CONTACT : No data was available.

INGESTION : Intake of tin has caused vomiting, diarrhoea and depression of the

central nervous system with symptoms like fatigue, headache and ataxia.

#### **SECTION 4: FIRST AID MEASURES**

Ingestion : Seek medical attention.  
Eye Contact : Flush eyes with plenty of water immediately for at 15 minutes. Seek medical attention.  
Skin Contact : Wash thoroughly with soap and warm water.  
Inhalation : Evacuate to a safe area with fresh air.

#### **SECTION 5: FIRE-FIGHTING MEASURES**

Extinguishing Media : NA  
Fire Fighting Instructions : NA  
Special Hazards : NA  
Unusual Fire and Explosion Hazards : NA

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

Leak/Spill : Place into properly labeled waste container and may be sent for recovery following appropriate recovery routes or methods.

#### **SECTION 7: HANDLING AND STORAGE**

Handling : Wash hand thoroughly with soap and water prior to eating, drinking or smoking. Do not smoke while soldering. Avoid inhalation of vapors and contact with skin and eyes. Observe good industrial practices.  
Storage : Store in a cool environment away from oxidizing agents.

#### **SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION**

Engineering Measures : Maintain general or local exhaust ventilation to meet exposure limit requirements.  
Personal Protection : Operator should be protected from fumes during electroplating process  
PROTECTIVE GLOVES : Impervious rubber  
EYE PROTECTION : Safety glasses

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Metallic buttons, balls, bars or any specified preform shapes  
Odor : No odor  
Solubility in water: : NA

Boiling Point(°C) : 600°C  
Melting Point(°C) : 232°C  
Vapor Pressure(mm of Hg at 20°C) : NA  
Vapour Density (air=1) : NA  
Percentage Volatiles (by Volume) : NA  
Volatile Organic Compound (VOC) : NA  
Evaporation Rate (butyl acetate=1) : NA  
Specific Gravity (water=1 at 25°C) : 7.30  
Flash Point (°C) : NA  
Auto-ignition Temperature(°C) : NE

#### **SECTION 10: PHYSICAL HAZARDS (STABILITY AND REACTIVITY)**

Condition to avoid : Unknown.  
Incompatibles : Oxidizing materials.  
Decomposition products : Unknown.  
Hazardous polymerization : Will not occur.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

Toxicity data : Triethyltin increased absorption in the body and is highly toxic, Triethyltin and other organic Sn compounds cause brain dysfunction and cerebral fluid retention  
Carcinogenicity : Not listed  
Reproductive Effect : None  
Effects of overexposure (Chronic Effect): Breathing of vapors may produce respiratory irritation. Long term inhalation of tin and insoluble tin compounds may cause tin dust lungs (stannosis). Chronic Inhalation of Sn in the form of fumes or dust particles leads to benign pneumoconiosis  
Target Organs : Gastro-intestinal tract, bones, kidneys and the liver  
Medical Conditions Generally Aggravated by Exposure : Fumes may irritate the eyes.

#### **SECTION 12: ECOLOGICAL INFORMATION**

Mobility & Bioaccumulation : Non volatile material  
Biodegradability : Non biodegradable  
Aquatic Toxicity : Aquatotoxicity of inorganic tin compounds is comparable to that of lead. Organic tin compounds are toxic to the aquatic ecosystems.

#### **SECTION 13: DISPOSAL INFORMATION**

Dispose according to federal, state and local regulations. This product is suitable for recovery following appropriate recovery routes or methods. If in doubt, contact Singapore Asahi.

## SECTION 14: TRANSPORT INFORMATION

UN Number : 3.3b (LAND)  
T.D.G. Classification : NA  
Packing group : III low danger  
Special shipping instruction : NA

## SECTION 15: REGULATORY INFORMATION

- a. Proposed classification : Harmful.
- b. Risk phrase
- |           |  |
|-----------|--|
| R20/21/22 | Harmful by inhalation, in contact with skin and if swallowed.                              |
| R33       | Danger of cumulative effect.   |
| R36/37/38 | Irritating to the eyes, respiratory system and skin.                                       |
| R48       | Danger of serious damage to health by prolonged exposure.<br>Harmful to aquatic organisms. |
- c. Safety phrase
- |              |  |
|--------------|--|
| S3/9/14      | Keep in a cool, well ventilated place away from oxidizing agents.  |
| S13          | Keep away from food, drink and animal feeding stuff.   |
| S23          | Do not breathe fume or vapor.  |
| S24/25/26/28 | Avoid contact with skin or eyes. In case of contact with skin, rinse immediately with plenty of water. After contact with skin, wash immediately with plenty of water. |
| S35          | This material with its container must be disposed of in a safe manner.   |
| S36/37/39    | Wear suitable protective clothing, gloves and eye/face protection.   |
| S44          | If feeling unwell, seek medical advice.  |
| S46          | If swallowed seek medical advice immediately.  |
| S51          | Use only in well ventilated areas.   |
| S59          | Refer to manufacturer/supplier for information on recovery/recycling.  |

## SECTION 16: OTHER INFORMATION

THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF THE COMPANY'S KNOWLEDGE AND BELIEVED ACCURATE AND RELIABLE AS OF THE DATE INDICATED.

HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.

\*optional

NE = Not Established

NA = Not Applicable

PEL = Permissible Exposure Level