



#### SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Synonyms:** Tin, tin anodes  
**CAS No.:** 7440-31-5  
**Molecular Weight:** 118.71  
**Chemical Formula:** Sn

**Manufacturer:**  
IMC-MetalsAmerica, LLC  
135 Old Boiling Springs Road  
Shelby, NC 28152 USA  
704-482-8200

**Emergency Telephone:** 704-482-8200  
**Outside the US Call:** 011-704-482-8200

#### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS No	Percent	Hazardous
Tin	7440-31-5	90-100%	Yes

#### SECTION 3: HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW:

**CAUTION! MAY BE HARMFUL IF INHALED. MAY CAUSE IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.**

##### SAF-T-DATA<sup>(tm)</sup> Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate (Life)  
Flammability Rating: 2 - Moderate  
Reactivity Rating: 1 - Slight  
Contact Rating: 1 - Slight

##### POTENTIAL HEALTH EFFECTS:

###### Ingestion:

Large doses may cause nausea, vomiting, and diarrhea.

###### Skin Contact:

No adverse effects expected. May cause mild irritation and redness.

###### Eye Contact:

No adverse effects expected but dust may cause mechanical irritation.

###### Aggravation of Pre-existing Conditions:

No adverse health effects expected.

## SECTION 4: FIRST AID MEASURES

### **Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

### **Skin Contact:**

Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.

### **Eye Contact:**

Wash thoroughly with running water. Get medical advice if irritation develops.

## SECTION 5: FIRE FIGHTING MEASURES

### **Fire:**

Autoignition temperature:

Dust Cloud: 630°C (1166°F);

Dust Layer: 430°C (806°F).

### **Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration: 0.19 g/l Particle size and air concentration determine reactivity.

### **Fire Extinguishing Media:**

Non Flammable.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### **Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

### **Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## SECTION 7: HANDLING AND STORAGE

### **Precautions:**

Keep locked up. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles such as oxidizing agents, combustible materials, metals, acids.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### **Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### **Personal Protection in Case of a Large Spill:**

Slash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

## SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance:</b>	Uniform, silvery metal	<b>Boiling Point:</b>	2507°C (4545°F)
<b>Odor:</b>	Odorless	<b>Melting Point:</b>	231.9°C (450°F)
<b>Solubility in Water:</b>	Not soluble	<b>Vapor Density (Air=1):</b>	No information found
<b>Density:</b>	7.31	<b>Vapor Pressure (mm Hg):</b>	1 at 1609°C (2928°F)
<b>pH Level:</b>	No information found	<b>Evaporation Rate (BuAc=1):</b>	No information found
<b>% Volatiles by Volume at 21°C (70°F):</b>	0		

## SECTION 10: CHEMICAL STABILITY & REACTIVITY INFORMATION

### Stability

Tin will oxidize, especially in the presence of moisture. Metal normally has a protective film of stannic oxide which thickens as the temperature is raised.

### Hazardous Decomposition Products:

No hazardous decomposition products.

### Hazardous Polymerization:

Will not occur.

### Incompatibilities:

Halogens and halogen trifluorides, cupric nitrate, sodium and potassium peroxide, sulfur, and some acids.

### Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

## SECTION 11: TOXICOLOGICAL INFORMATION

No LD50/LC50 information found relating to normal routes of occupational exposure. Investigated as a tumorigen.

### Cancer Lists

Ingredient	NTP Carcinogen		
	Known	Anticipated	IARC Category
Tin (7440-31-5)	No	No	None

## SECTION 12: ECOLOGICAL INFORMATION

### Environmental Fate:

No information found.

### Environmental Toxicity:

No information found.

## SECTION 13: DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## SECTION 14: TRANSPORTATION INFORMATION

Not regulated.

## SECTION 15: REGULATORY INFORMATION

Chemical Inventory Status - Part 1				
Ingredient	TSCA	EC	Japan	Australia
Tin (7440-31-5)	Yes	Yes	No	Yes

Chemical Inventory Status - Part 2	Canada			
Ingredient	Korea	DSL	NDSL	Phil.
Tin (7440-31-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1	SARA 302		SARA 313	
Ingredient	RQ	TPQ	List	Chemical Catg.
Tin (7440-31-5)	No	No	No	No

Federal, State & International Regulations - Part 2	CERCLA	RCRA	TSCA
Ingredient		261.33	8 (d)
Tin (7440-31-5)	No	No	No

Chemical Weapons Convention: No  
TSCA 12(b): No  
CDTA: No  
SARA 311/312:  
Acute: Yes

Chronic: Yes  
Fire: No  
Pressure: No  
Reactivity: No  
(Pure/Solid)

**Australian Hazchem Code:** None allocated

**Poison Schedule:** None allocated.

**WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## SECTION 16: OTHER INFORMATION

**NFPA Ratings:** Health: 1 Flammability: 1 Reactivity: 1

**Label Hazard Warning:**

CAUTION! MAY BE HARMFUL IF INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

**Label Precautions:**

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

**Label First Aid:**

If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

**Product Use:**

Tin electroplating.

**Revision Information:**

MSDS Section(s) changed since last revision of document include: Various.

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