Material Safety Data Sheet
Tin, Powder, 99.9999%

MSDS# 97255

Section 1 - Chemical Product and Company Identification

MSDS Name:	Tin, Powder, 99.9999%
Catalog Numbers:	AC194310000, AC194310050, AC325840000, AC325840010, AC325840050, T129-500
Synonyms:	Metallic Tin; Silver Matt Powder; Tin Flake; Tin Powder; Wang; Elemental Tin; Stannum; C.I. 77860; C.I. Pigment Metal 5

Company Identification:	Acros Organics BVBA Janssen Pharmaceuticalaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	800-ACROS-01
For information in Europe, call:	+32 14 57 52 11
Emergency Number, Europe:	+32 14 57 52 99
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300
CHEMTREC Phone Number, Europe:	703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#:	7440-31-5
Chemical Name:	TIN
%:	99.9999%
EINECS#:	231-141-8

Hazard Symbols:	None listed
Risk Phrases:	None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! This is expected to be a low hazard for usual industrial handling. May cause central nervous system effects. May cause respiratory and digestive tract irritation. May cause mechanical eye and skin irritation. Inhalation of fumes may cause metal-fume fever. Target Organs: Central nervous system.

Potential Health Effects

Eye:	May cause eye irritation.
Skin:	May cause skin irritation. Prolonged and/or repeated contact may cause irritation and/or dermatitis. Low hazard for usual industrial handling.
Ingestion:	May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Low hazard for usual industrial handling. Ingested inorganic tin exhibits only moderate toxicity due to poor absorption and rapid tissue turnover. Ingestion of large amounts may cause gastrointestinal irritation, nausea, cramps, vomiting and diarrhea. May interfere with various enzyme systems. Inorganic tin salts may cause systemic effects on the central nervous system, heart and liver.
Inhalation:	Dust is irritating to the respiratory tract. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. When inhaled as a dust or fume, may cause benign pneumoconiosis.

Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic exposure to tin oxide dusts and fumes may result in stannosis (benign pneumoconiosis).

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

Skin: Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid if irritation or symptoms occur.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Do NOT use carbon dioxide. If water is the only media available, use in flooding amounts. Use dry sand, dry chemical, soda ash or lime.

Autoignition Temperature: 430 deg C (806.00 deg F)

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: 0.19

NFPA Rating: health: 1; flammability: 1; instability: 1;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Storage: Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
TIN	2 mg/m3	2 mg/m3 TWA 100 mg/m3 IDLH	none listed

OSHA Vacated PELs: TIN: 2 mg/m3 TWA

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State:	Solid
Color:	silver white
Odor:	none reported
pH:	Not applicable
Vapor Pressure:	1 mm Hg @ 1492 deg
Vapor Density:	Not available
Evaporation Rate:	Not applicable.
Viscosity:	Not applicable.
Boiling Point:	2507 deg C (4,544.60°F)
Freezing/Melting Point:	231.9 deg C (449.42°F)
Decomposition Temperature:	
Solubility in water:	Slightly soluble in hot water.
Specific Gravity/Density:	7.31
Molecular Formula:	Sn
Molecular Weight:	118.69

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures. Oxidizes when exposed to air.
Conditions to Avoid:	Incompatible materials, dust generation, moisture, excess heat.
Incompatibilities with Other Materials	Halogens, nitric acid, sodium peroxide, sulfur, copper nitrate, hydrochloric acid, tin chloride, potassium peroxide.
Hazardous Decomposition Products	Potassium peroxide, tin/tin oxides.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 7440-31-5: XP7320000
LD50/LC50:	RTECS: Not available.
Carcinogenicity:	TIN - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:Not available

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 7440-31-5: Not available

Canada

CAS# 7440-31-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B

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

CAS# 7440-31-5 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 7440-31-5 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 5/04/1999

Revision #6 Date 7/20/2009

Reviewed
2012.08.16
10:31:00 -04'00'

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
