

Safety Data Sheet FAWSDS-20

Revision Date: 04-25-2018



1) IDENTIFICATION

Product Identifier	Tin Plating
Other Means of Identification	
SDS Number	FAWSDS-20
Recommended Use	None Known
Restrictions on Use	None Known
Manufacturer/Importer/Supplier/Distributor Information	
Manufacturer/Supplier	Fisk Alloy, Inc. PO Box 26 10 Thomas Road Hawthorne, NJ 07507, USA
General Assistance	Call Fisk Alloy: 973 825 8500
Email	info@fiskalloy.com
Contact Person	None Known
Emergency Telephone	For all transportation accidents, call Chemtrec at 800 424 9300

2) HAZARD(S) IDENTIFICATION

OSHA/HCS Status

This material is not classified by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of Substance or Mixture

Physical Hazards	Not Classified
Health Hazards	Not Classified
Environment Hazards	Not Classified

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GHS Label Elements No Labeling Applicable

Signal Word Not Applicable

Hazard Statements Not Applicable

Hazards Not Otherwise Classified (HNOC)

Metallic product which poses little or no immediate hazard in solid form. Exposure to the elements listed in Section 3 by inhalation, ingestion, and skin contact can occur during routine handling, material transfer, chemical processing or further processing. If this material is converted or becomes part of a solid shape, exposure can occur when melting, casting, dross handling, pickling, chemical cleaning, heat treating, abrasive cutting, welding, grinding, sanding, polishing, milling, crushing or otherwise heating or abrading the surface of this material in a manner which generates particulate. Exposure may also occur during repair or maintenance activities on contaminated equipment such as: furnace rebuilding, maintenance or repair of air cleaning equipment, structural renovation, welding, etc. Particulate depositing on hands, gloves, and clothing, can be transferred to the breathing zone and inhaled during normal hand to face motions such as rubbing of the nose or eyes, sneezing, coughing, etc.

3) COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE NAME	CAS NUMBER	PERCENT
Tin	7440-31-5	100

4) FIRST AID MEASURES

Inhalation

When symptoms occur: go into open air and ventilate suspected area. Keep at rest and in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact

Cool skin rapidly with cold water after contact with molten product. Removal of solidified molten material from skin requires medical assistance. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash with plenty of soap and water. Wash contaminated clothing before reuse. Obtain medical attention if irritation persists.

Eye Contact

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Removal of solidified molten material from the eyes requires medical assistance. Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion

Ingestion is unlikely due to physical state. Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects, Acute and Delayed

Inhalation: Inhalation of dusts and fumes can cause metal fume fever. The Symptoms can include a metallic taste in mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath.

Skin Contact: May cause an allergic skin reaction. Dust from physical alteration of this product causes skin irritation. Causes severe skin burns. Contact with fumes or metal powder will irritate skin. Contact with hot, molten metal will cause thermal burns. Dust may cause irritation in skin folds or by contact in combination with tight clothing. Mechanical damage via flying particles and chipped slag is possible.

Eye Contact: Dust may cause mechanical irritation to eyes, nose, throat, and lungs.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms

Tin: Has been shown to increase incidence of sarcoma in animal tests. Chronic exposure to tin dusts and fume may result in "stannosis", a mild form of pneumoconiosis.

Indication of Immediate Medical Attention and Special Treatment Needed

In case of shortness of breath, give oxygen. If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

General Information

IF exposed or concerned: Get medical advice/attention.

5) FIRE FIGHTING MEASURES

Suitable Extinguishing Media

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Unsuitable Extinguishing Media

No information available.

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Specific Hazards Arising from the Chemical

Combustible dust formation is a risk. Thermal decomposition can lead to release of irritating gases and vapors.

Special Protective Equipment and Precautions for Firefighters

Precautionary Measures Fire: Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: If this material becomes airborne as a respirable particulate during a fire situation, pressure-demand self-contained breathing apparatus must be worn by firefighters or any other persons potentially exposed to the metal fumes.

6) ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not handle until all safety precautions have been read and understood. Do not breathe vapors from molten product. Avoid all eye and skin contact and do not breathe dust, fumes, and vapors. Ensure adequate ventilation. Ensure that air-handling systems are operational.

For Non-Emergency Personnel: Use appropriate personal protection equipment (PPE). Evacuate unnecessary personnel. Use explosion-proof equipment.

For Emergency Personnel: Equip cleanup crew with proper protection. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and Materials for Containment and Clean Up

Contain and collect as any solid. Clear up spills immediately and dispose of waste safely. For particulates and dust: Avoid actions that cause dust to become airborne during clean-up such as dry sweeping or using compressed air. Use PPE described in Section 8. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up.

7) HANDLING AND STORAGE

Precautions for Safe Handling

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Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place.

Incompatible Materials: Strong acids, strong bases and strong oxidizers. Alkalis. Metal oxides. Water, humidity. Corrosive substances in contact with metals may produce flammable hydrogen gas.

8) EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

COUNTRY	TYPE	TIN Value (mg/m ³)
Belgium	TWA STEL	2 (a, b), 0.1 (c), 2 (e) 0.2 (c)
Brazil	TWA	-
Canada-Alberta	TWA STEL	2 (a, b), 0.1 (c) 0.2 (c)
Canada-British Columbia	TWA STEL	2 (a, b), 0.1 (c) 0.2 (c)
Canada-Ontario	TWA	2 (a, b), 0.1 (c), 2 (e)
Canada-Quebec	TWA STEL	2 (a, b), 0.1 (c) 0.2 (c)
China	TWA	-
Denmark	TWA STEL	2 (a) 4 (a)
France	TWA	-
Germany	TWA	-
Hong Kong	TWA STEL	2 (a, b), 0.1 (c) 0.2 (c)
India	TWA	-
Italy	TWA	2 (a)

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Japan	TWA	-
Korea	TWA	2 (a, b), 0.1 (c), 2 (e)
Malaysia	TWA	-
Mexico	TWA STEL	2 (a), 0.1 (c) 4 (a), 0.2 (c)
Poland	TWA	2 (a)
Portugal	TWA	-
Russia	TWA	-
Singapore	TWA	2 (a)
Sweden	TWA STEL	2 (d), 0.1 (c), 2(e) 0.2 (c)
Taiwan, R. O. C.	TWA	2 (c)
United Kingdom	TWA STEL	2 (a) 4 (a)
USA ACGIH	TWA (TLV)	2 (a), 0.1 (c)
USA OSHA	TWA (PEL)	2 (e), 0.1 (c)
USA NIOSH	TWA (REL)	2 (e), 0.1 (c)

Note: a-Oxide and inorganic compounds, as Sn except tin hydride (SnH₄); b-Metal; c-Organic compounds, as Sn; d-Tin and inorganic compounds, as Sn, inhalable dust ; e-Inorganic compounds (except oxides) (as Sn).

Appropriate Engineering Controls

Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. Ensure all national/local regulations are observed.

Individual Protection Measures, Such as Personal Protective Equipment



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Respiratory Protection

Respiratory protection not normally needed. If dusting occurs or fumes are generated above the established occupational exposure limits, use a NIOSH-approved half-face or full-face respirator equipped with High Efficiency Particulate (HEPA) filter cartridges.

Hand Protection

Wear chemically resistant protective gloves. If material is hot, wear thermally resistant protective gloves.

Eye Protection

Chemical goggles or safety glasses.

Other Protection

Chemically resistant materials and fabrics. With molten material wear thermally protective clothing. If generating a dust, wash thoroughly after handling, especially before eating, drinking, or smoking. Wash contaminated clothing before reuse.

General Hygiene Considerations

Do not eat, drink, or smoke while using this product in dust form. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes, and Clothing.

9) PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Silver/Grey Metallic
Physical State	Solid
Form	Solid
Color	Silver/Grey
Odor	None
Odor Threshold	Not Available
pH	Not Applicable
Melting Point	449.5°F
Boiling Point	No Data
Flash Point	Not Applicable

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Evaporation Rate	Not Applicable
Flammability (Solid, Gas)	Not Applicable
Lower Explosive Limit	Not Applicable
Upper explosive Limit	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Relative Density	Not Available
Solubility in Water (20°C)	Negligible
Partition Coefficient (N-Octanol/Water)	Not Applicable
Auto-Ignition Temperature	Not Applicable
Decomposition Temperature	Not Applicable
Viscosity (cps)	Not Applicable
Others	
Molecular Weight	Not Applicable – Mixture
Volatiles	Not Applicable
Specific Gravity (g/cc)	7.3
Bulk Density (g/cc)	7.3

10) STABILITY AND REACTIVITY

Reactivity

Hazardous reactions will not occur under normal conditions.

Chemical Stability

Stable under recommended storage conditions and stable in solid form.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

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Conditions to Avoid

Excessive heat. Dust generation. Incompatible materials.

Incompatible Materials

Strong oxidizing agents, Sulphur compounds, Strong bases, Halogens, Do not store near acids.

Hazardous Decomposition Products

Tin/tin oxides.

11) TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation: Inhalation of dusts and fumes can cause metal fume fever. Symptoms can include a metallic or sweet taste in the mouth, sweating, shivering, headache, throat irritation, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, fatigue, and shortness of breath.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Skin Contact: May cause an allergic skin reaction. Contact with fumes or metal powder will irritate skin. Contact with hot, molten metal will cause thermal burns. Dust may cause irritation in skin folds or by contact in combination with tight clothing. Mechanical damage via flying particles and chipped slag is possible.

Eye Contact: Dust may cause mechanical irritation to eyes.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics

No information available.

Delayed and Immediate Effects and Chronic Effects from Short- and Long-Term Exposure

In massive form, no hazard exists. If physically altered to present slivers, ribbons, dusts or fumes from molten materials.

Tin: Has been shown to increase incidence of sarcoma in animal tests. Chronic exposure to tin dusts and fume may result in "stannosis", a mild form of pneumoconiosis.

Numerical Measures of Toxicity

No Information Available

Skin Corrosion/Irritation

Not Classified

Serious Eye Damage/Eye Irritation

Causes serious eye irritation.

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Respiratory or Skin Sensitization

Respiratory Sensitization Not Classified
Skin Sensitization Not Classified

Germ Cell Mutagenicity

Not Classified. This product is not known or reported to be mutagenic.

Carcinogenicity

Not Classified. This product is not known or reported to be carcinogen.

Reproductive Toxicity

Not Classified. This product is not known or reported to cause reproductive or developmental effects.

Specific Target Organ Toxicity — Single Exposure Not Classified

Specific Target Organ Toxicity — Repeated Exposure Not Classified

Aspiration Hazard Not Classified

12) ECOLOGICAL INFORMATION

Ecotoxicity No Information Available

Numerical Measures of Toxicity

COMPONENT	TEST	SPECIES	TEST RESULTS
Tin (CAS# 7440-31-5)	Fish LC ₅₀	Fathead minnow (<i>Pimephales Promelas</i>)	0.0124mg/l, 96 Hours
	Algae EC ₅₀	Microalgae (<i>Pseudokirchneriella Subcapitata</i>)	0.0192mg/l, 72 Hours

Persistence and Degradability No Data Available

Bioaccumulative Potential No Data Available

Mobility in Soil No Data Available

Other Adverse Effects

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No known significant effects or critical hazards.

13) DISPOSAL CONSIDERATIONS

Disposal Instructions

Dispose of in accordance with local regulations. Do not contaminate ponds, waterways or ditches with chemical or used containers.

Contaminated Packaging None Known

14) TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG Not regulated for transport

In Accordance with IATA Not regulated for transport

15) REGULATORY INFORMATION

US Federal Regulations

This product is a "Non Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. Substance is on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Substance is not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Substance is not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Substance is not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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Hazard Categories

Immediate Hazard	Yes
Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

SARA 302/304 Extremely Hazardous Substance

Substance is not listed.

SARA 311/312 Hazardous Chemical No

SARA 313 (TRI Reporting)

Substance is not listed.

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Substance is not listed.

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130): Substance is not listed.

Safe Drinking Water Act (SDWA): Substance is not listed.

US State Regulations

US. Massachusetts Worker and Community Right-to-Know Act:

Tin (CAS# 7440-31-5)

US. New Jersey Worker and Community Right-to-Know Act:

Tin (CAS# 7440-31-5)

US. Pennsylvania Worker and Community Right-to-Know Law:

Tin (CAS# 7440-31-5)

US. California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT):

Substance is not listed.

Canada Regulations

This substance has not been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR).

International Inventories

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COUNTRY(S) OR REGION	INVENTORY NAME	ON INVENTORY (YES/NO)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemical List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
US & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

* A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16) ADDITIONAL INFORMATION

Issue Date —
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References

ACGIH: American Conference of Governmental Industrial Hygienist
NIOSH: The National Institute for Occupational Safety and Health
CAS: Chemical Abstracts Service (division of the American Chemical Society)

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DOT: Department of Transportation

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

LC₅₀: Lethal Concentration, 50 Percent

EC₅₀: Effective Concentration of Substance That Causes 50% of Maximum Response

TWA: Time-Weighted Average

STEL: Short Term Exposure Limit

REL: Recommended Exposure Limits

PEL: Permissible Exposure Limit

TLV: Threshold Limit Values

Disclaimer

The information, recommendations, and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.