

SECTION 1. IDENTIFICATION

Product/Trade Name: Tin
NAFTA H.S. description 8001.20

Info furnished by: Hallmark Metals Corporation
Address: 930 Wellington Avenue
Cranston, RI 02910
Emergency Phone: 888-467-8000

SECTION 2. HAZARDS IDENTIFICATION

Primary routes of entry: ingestion of dust, inhalation of dust or fume.

Exposure to the massive form of tin presents few hazards in itself. However, normal handling of tin may result in generation of dusts. And inhalation or ingestion of these dusts may present potentially significant health hazards. Thermal cutting and melting of tin may produce fumes containing the components elements, and breathing these fumes may also present potentially significant health hazards. Special precautions should be taken if metal is contaminated.

Prolonged inhalation of tin fumes or dusts, or ingestion of tin compounds can result in tin poisoning. Symptoms include abdominal pain or colic, constipation, nausea, joint and muscle pains, and muscular weakness. Severe cases of overexposure may lead to central nervous systems disorders, characterized by somnolence, stupor, and ultimately death.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Element	CAS	Carcinogen	TLV/TWA	OSHA PEL ACGIH/OSHA
Tin	7440-31-5	No	2.0 mg/cu m	2.0 mg/cu m

SECTION 4. FIRST AID MEASURES

Generally not hazardous in normal handling, however good laboratory practices should always be used. Avoid long term exposure to skin or by inhalation.

FIRST AID: SKIN: Wash exposed area with soap and water. If irritation persists, seek medical attention.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but it is not necessary to induce.

SECTION 5. FIRE - FIGHTING MEASURES

Fire Extinguisher Type: Special powder or dry sand. Do not use water!

Fire/Explosion Hazards: Dust at sufficient concentrations can form explosive mixtures with air.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

No special precautions are necessary for spills of bulk material. If large quantities of dust are spilled, remove by vacuuming or wet sweeping to prevent heavy concentrations of airborne dust. Clean-up personnel should wear respirators and protective clothing.

Metal can be reclaimed for refuse. Follow federal, state, and local regulations regarding disposal.

SECTION 7. HANDLING AND STORAGE

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Keep container tightly closed in a dry and well-ventilated place.

Air and moisture sensitive. Handle and store under inert gas. Keep in dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENTS	CAS-NO.	VALUE	PARAMETERS	BASIS
Tin	7440-31-5	TWA	2 mg/m ³	USA. ACGIH Threshold Limit Values
		TWA	2 mg/m ³	USA. NIOSH Recommended Exposure Limits
		TWA	2 mg/m ³	USA. OSHA – Table Z-1 limits for air contaminants
		TWA	2 mg/m ³	USA. OSHA – Table Z-1 limits for air contaminants – 1910.1000

Use general and local exhaust ventilation to keep airborne concentrations of dust or fume below the TLV. Employees should wear OSAH or NIOSH approved respirators for protection against airborne dust or fumes. Full protective clothing should be worn by workers exposed to heavy concentrations of dust, and showering should be required

before changing into street clothes. Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis.

Approved safety glasses or goggles should be worn when working with dusty material and molten metal. Safety stations should be provided in close proximity to work areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Melting Point	450° F
Boiling Point	4100
Vapor Pressure	Not Volatile
Vapor Density (air is 1)	Not Volatile
Solubility in Water	NIL
Appearance & Color	yellow
Specific Gravity g/cc	7.30
Lbs.cu.in	0.264
Atomic Weight	118.70
Odor	None
% Volatile	Nil
pH	N/A
Evaporation	N/A

SECTION 10. STABILITY AND REACTIVITY

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: no data available

Conditions to avoid:no data available

Materials to avoid: Strong oxidizing agents, Sulphur compounds, Strong bases, Halogens, Do not store near acids.

Hazardous decomposition products: Hazardous decomposition products formed under fire conditions. - Tin/tin oxides

Other decomposition products – no data available

SECTION 11. TOXICOLOGICAL INFORMATION

Inhalation – May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion – May be harmful if swallowed

Skin – May be harmful if absorbed through skin. Causes skin irritation.

Eyes – Causes eye irritation

SECTION 12. ECOLOGICAL INFORMATION

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Metal can be claimed for refuse. Follow Federal, State, and local regulations regarding disposal.

SECTION 14. TRANSPORT INFORMATION

No data available

SECTION 15. REGULATORY INFORMATION

HMIS (U.S.A.):

Health Hazard: 1 Fire Hazard: 1 Reactivity: 0 Personal Protection: B

National Fire Protection Association (U.S.A.):

Health: 1 Flammability: 1 Reactivity: 0

Specific hazard:

Protective Equipment: Gloves (impervious). Lab coat. Not applicable. Safety glasses.

SECTION 16. OTHER INFORMATION

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