

National Solder Co Material Safety Data Sheet

Tin/Zinc Alloys (80/20 Sn/Zn)

Section I:

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Section II: Hazardous Ingredients/Identity information

Hazardous Component	CAS #	OSHA TWA	ACGIH TWA	Other limits
Tin	7440-31-5	2mg/M3	2mg/M3	NE
+ Zinc	7440-66-6	5mg/M3	5mg/M3	NE
% as specified as oxide				

Only those ingredients listed in this section have been determined to be hazardous as defined in 29CFR 1910.1200.
An ingredient marked with an asterisk(*) is also listed in 29CFR 1910.1200(D) #4 as a known or suspected cancer hazard.

+ denotes a chemical regulated as toxic by the Environmental Protection Agency (EPA) as outlined in 40CFR Part 372 (section 313)

Section III: Physical/Chemical Characteristics

Boiling Point: 1664F
Vapor Pressure (mm Hg): NE
Vapor Density: NE
Solubility in water: insoluble
Appearance and odor: silver grey solid, odorless

Specific Gravity: 6.1
Melting Point: 600 F
Evaporation Rate
(butyl acetate=1): < 1

Section IV: Fire and Explosion Hazard Data

Flash Point: non flammable
Flammable limits l_{el}: NA
uel:NA
Extinguishing media: all
Special fire fighting procedures: use self-contained breathing apparatus
Unusual Fire and Explosion Hazards: High concentrations of dust may present an explosion hazard. May release metal and metal oxide fumes.

Section V: Reactivity Data

Stability : STABLE Conditions to avoid : none
Incompatibility (materials to avoid): oxidizing materials, acids & bases, turpentine
Hazardous Decomposition or Byproducts (incomplete combustion): Metal & metal oxide fumes
Hazardous Polymerization: WILL NOT OCCUR Conditions to avoid: none

Section VI: Health Hazard Data

Routes of entry: Inhalation? yes Skin? no Ingestion? yes

Health Hazards (acute and chronic): Contact with material or fumes may cause skin, eye and respiratory tract irritation. Excessive inhalation of dust or fumes may result in "metal fume fever", with the onset of symptoms taking several hours, after exposure, to manifest. Ingestion of very large amounts of material may be toxic. Excessive and repeated inhalation may result in benign pneumoconiosis. Chronic exposure via inhalation and ingestion may result in liver and red blood cell effects. Studies show that potential health risks vary by individual. Always minimize exposure as a precaution.

Carcinogenicity: not determined NTP? no IARC Monographs? no

Signs and symptoms of exposure: Inhalation-Nose & throat irritation, headache, dizziness, difficulty breathing, flu like symptoms, greyish palor to skin. Ingestion-nausea, vomiting, cramps. Skin-redness, burning, rash, dryness. Eye-redness, burning, tearing, blurred vision.

Medical Conditions Aggravated by exposure: Skin, blood and respiratory conditions.

Emergency first aid procedures:

 Skin: Flush with water immediately - Seek medical attention for severe burns.

 Eyes: Flush with water for 15 minutes - Seek medical attention

 Ingestion: Drink large amount of water, induce vomiting if practical-Seek medical attention.

 Never give anything by mouth to an unconscious person.

 Inhalation: Remove to fresh air. Support respiration if required.
 Seek medical attention if required.

Section VII: Precautions for Safe Handling and Use

Steps to be taken if material is released or spilled: Vacuum, absorb or flush in to a chemical sewer. Do not use any method which will generate dust.

Waste Disposal Method: dispose of in accordance with all local state and federal regulations

Other Precautions: Avoid skin & eye contact, inhalation & ingestion of fumes and material.

Wash contaminated clothing before reuse. Keep away from children. Do not reuse container.

Section VIII: Control Measures

Respiratory Protection (type): Dust mask for particulates. Metal fume/HEPA type respirator for fumes.

Ventilation Local exhaust preferred Special: none

Mechanical: OK Other: NE

Protective gloves: impervious Eye protection: glasses or goggles

Other Protective Clothing or Equipment: as required to avoid contact.

Work/Hygienic Practices: Wash after use. Follow good industrial hygienic practices.

Section IX: Additional Information

DOT Hazard Classification: Non-hazardous

NFPA Classification (NFPA 325M, 8th edition) (Health, Flammability, Reactivity): 1-0-0

Other: NE

Delivery Information

International delivery regulation: LATA- Dangerous Goods Regulation, Not Restricted.

UN code: Not Regulated

Domestic Delivery Regulation: None known

Special delivery method and precaution: None known

Law and Regulation

Conform to regulation; 1. SABS regulation

harmful materials. 2. Identification rules for hazardous and

facility requirement. 3. Standards for waste disposal treatment and

4. Road traffic safety rules.

Additional Information

Reference: MSDS database, CCINFO CD 98-2, NIOSH/OSHA, Occupational Health Guidelines for Chemical Hazards, 1981.

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NE = not established NA = not applicable