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Safety Data Sheet

97/3 Tin/Copper Alloys

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

Section I: Hazardous Ingredients/Identity information

Hazardous Component CAS # OSHA TWA ACGIH TWA Other limits Percentage

+ Copper 7440-50-8 0.1mg/M3 0.2mg/M3 NE as specified

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 40 CFR Part 372 (Section 313)(SARA Title III).

Section II: Physical/Chemical Characteristics

Composition: 97% Sn (TIN) & 3% Cu (COPPER)

Boiling Point: 2210 C (4010 F) Density: 7.46 g/cc

Vapor Pressure (mm Hg): 1 @ 1375 C(2507 F) Melting Point: 230 C (446 F)

Vapor Density: NA Evaporation Rate Solubility in water: Nil (butyl acetate=1): NAP

Appearance and odor: Grey solid, odorless

Section III: Fire and Explosion Hazard Data

Flash Point: NA Flammable limits lel: NAP uel: NAP

Extinguishing media: Dry chemical, do not use water

Special firefighting 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 IV: Reactivity Data

Stability : STABLE Conditions to avoid : none

Incompatibility (materials to avoid):Oxidizers, strong acids, turpentine, halogens

Hazardous Decomposition or Byproducts: Metal fumes, metal oxides.

Hazardous Polymerization: WILL NOT OCCUR Conditions to avoid: none

Section V: Health Hazard Data

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

Health Hazards (acute and chronic): Contact with material, dust and 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 may cause digestive tract irritation. 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, red blood cell, kidney, reproductive and respiratory system effects. Excessive and repeated skin exposure may result in systemic effects including pigmentation changes.

Studies show that potential health risks vary by individual. Always minimize exposure.

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 skin paler. Ingestion-nausea, vomiting, cramps.

Skin-redness, burning, rash, dryness. Eye-redness, burning, tearing, blurred vision.

Medical Conditions Aggravated by exposure: Respiratory tract, skin, blood conditions.

Emergency first aid procedures:

Skin: Flush with water immediately - Treat for burns, seek medical attention if required

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

Ingestion: Drink large amounts 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 VI: Precautions for Safe Handling and Use

Steps to be taken if material is released or spilled: Collect and use, if contaminated or in

small particles, vacuum or collect material. Never use methods which generate dust.

Waste Disposal Method: Never dispose of in trash. Hold for recycling or 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 VII: Control Measures

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

Ventilation Local Exhaust preferred Special: NE

Mechanical: OK Other: NE

Protective Gloves: Heat resistant during soldering

Eye Protection: Goggles or face shield during soldering

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

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

Section VIII: Additional Information

DOT Classification: non-hazardous

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. SATAS regulation

2. Identification rules for hazardous and harmful materials.

3. Standards for waste disposal treatment and facility requirement.

4. Road traffic safety rules.

Additional Information

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

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NE = not established NA = not available NAP = not applicable

REVISION DATE: 30 January 2025