

# NATIONAL SOLDER CO

## Material Safety Data Sheet

OSHA's Hazard Communication Standard

---

### 97/3 Tin/Copper Alloys

#### Section I:

NATIONAL SOLDER CO  
13 ARKIN STR  
INDUSTRIES EAST  
GERMISTON 1401

Telephone 011-8739000

1/6/2005

---

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

#### Section II: 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 III: Physical/Chemical Characteristics

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

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

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

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

Appearance and odour: Grey solid, odourless

#### Section IV: Fire and Explosion Hazard Data

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

Extinguishing media: Dry chemical, do not use water

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): Oxidizers, strong acids, turpentine, halogens

Hazardous Decomposition or By-products: Metal fumes, metal oxides.

Hazardous Polymerization: WILL NOT OCCOUR Conditions to avoid: any

## **Section VI: 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 pallor. 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 VII: 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 VIII: 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 IX: 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. SABS 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: MSDS database, CCINFO CD 98-2, NIOSH/OSHA, Occupational Health Guidelines for Chemical Hazards, 1981.

Prepared by: Kirit Daya

The information and recommendations contained within this publication have been compiled from sources believed to be reliable and to represent the best information available to NATIONAL SOLDER CO at the time of issue. No warranty, guarantee, or representation is made by NATIONAL SOLDER CO nor does NATIONAL SOLDER CO assume any responsibility in connection there within; nor can it be assumed that all acceptable safety measures or other safety measures may not be required under particular or exceptional conditions or circumstances.

---

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