

**1. IDENTIFICATION OF THE SUBSTANCE AND THE SUPPLIER**

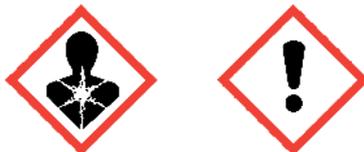
Product identifier	: Ag solder: SE-0AG08, SE-2AG08, SD-41, SD-64,		
Manufacturer	: TAIYO ELECTRIC IND.CO.,LTD.	Section	: Engineering department
Address	: 2-16-8 Yamate, Fukuyama, Hiroshima JAPAN 720-0092		
Tel.	: 084-951-1512	FAX	: 084-951-9531
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		E-mail	: info@goot.co.jp

**2. HAZARD IDENTIFICATION**

## &lt;GHS classification&gt;

Substances and mixtures, which in contact with water, emit flammable gases	: Classification not possible
Corrosive to metals	: Classification not possible
Acute toxicity(Oral)	: Not classified
Acute toxicity(Dermal)	: Not classified
Inhalation(Gases)	: Not classified
Inhalation(Vapors)	: Classification not possible
Inhalation(Dusts/Mists)	: Category 4
Skin corrosion/Irritation	: Not classified
Serious eye damage/eye irritation	: Not classified
Sensitization(Respiratory)	: Category 1
Sensitization(Skin)	: Category 1
Germ cell mutagenicity	: Category 2
Carcinogenicity	: Category 2
Reproductive toxicity	: Category 1B
Specific target organ systemic toxicity(Single exposure)	: Category 2
Specific target organ systemic toxicity(Repeated exposure)	: Category 1
Aspiration hazard	: Classification not possible
Hazardous to the aquatic environment	: Not classified
Acute hazard	
Chronic hazard	

## &lt; GHS label elements &gt;



## &lt; Hazard Statement &gt;

Danger

## &lt; Hazard and toxicity information &gt;

- May cause an allergic skin reaction
- Harmful if inhaled.(Gases, Vapors, Dust ,Mist)
- May cause allergy or asthma symptoms or breathing difficulties if inhaled
- May cause heritable genetic damage

- May cause cancer
- May damage fertility or the unborn child
- Causes damage to organs through prolonged or repeated exposure

< Precautionary statement >

**【Prevention】**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear personal protective equipment where appropriate.
- Handle in a place with good ventilation.

**【Response】**

- IF INHALED: : Remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a doctor.
- IF ON SKIN (or hair): : Wash with plenty of soap and water.  
If skin irritation occurs: Get medical advice/attention.
- IF exposed or concerned: : Get medical advice/attention.
- IF YOU FEEL UNWELL. : Get medical advice/attention.

**【Storage】**

- Store in a container.

**【Disposal】**

- Dispose of contents/container in accordance with local/regional/national/international regulations

### 3.COMPOSITION / INFORMATION ON INGREDIENTS

Classification of the chemical : Mixture  
substance or/mixture

Chemical name or common name: Rosin cored solder

< Concentration or Concentration range >

Chemical name	Percent (wt%)	Chemical formula	Law Concerning the Examination and Regulation of Manufacturer etc. of Chemical Substances	CAS No.
Tin	58.9%	Sn	Not applicable	7440-31-5
Lead	36.8%	Pb	Not applicable	7439-92-1
Silver	2.5%	Ag	Not applicable	7440-22-4
Rosin	1.8%	---	Not applicable	---

### 4.FIRST-AID MEASURES

IF INHALED : Remove person to fresh air and keep comfortable for breathing.  
 IF ON SKIN : Wash with plenty of soap and water.  
 IF IN EYES : Rinse cautiously with water for several minutes. Get medical advice/attention.  
 IF SWALLOWED : Induce vomiting. Get medical advice/attention.  
 Most important effects and symptoms : None known

Protection for first-aid responders : None known

### 5. Fire Fighting Measures

Extinguishing Media : Dry chemical, air foam, carbon dioxide (except water contained)  
 Unsuitable Extinguishing Media : Do not use water if metal is molten  
 Specific firefighting measures : Fire-fighting shall be conducted from the windward of the fire as much as possible  
 : Eliminate all ignition sources as soon as possible  
 Special protective equipment for fire fighter : Fight from upwind. Wear respiratory protection to prevent inhaling gases.

### 6.ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures  
 • Fight from upwind. Wear appropriate protective equipment (glasses, gloves, mask,)  
 Environmental precautions  
 • Pay attention so that the product does not flow into the sewage or public water area.  
 Recovery methods and equipment, neutralization, containment and clean :  
 • After cooling the leakage, sweep it or absorb it with a vacuum cleaner. Collect and store in a suitable container.  
 • Regarding handling after collection, see "13. DISPOSAL CONSIDERATIONS"  
 Prevention of Secondary Hazards  
 • Eliminate all ignition sources as soon as possible, and prepare extinguishing media

### 7.HANDLING AND STORAGE

【Handling】  
 Appropriate engineering controls : Do not handle with bare hands.  
 Local exhaust/Total ventilation : Require the partial exhaust at the handling place in an indoor work place.  
 Precautions for safe handling : Wear suitable protective items such as protective glasses and protective gloves.  
 【Storage】  
 Appropriate engineering controls : Store in a cool place.  
 Engineering measures : Protect from sunlight. Store in a well-ventilated place. Keep cool.  
 Storage condition  
 Hazardous substance by mixing : Avoid contact with heat, strong acid, strong oxidizers.

### 8.EXPOSURE CONTROLS/PERSONAL PROTECTION

Facilities measures : Require the partial exhaust at the handling place  
 Control parameter : Not established  
 Acceptable parameter : ACGIH TWA 2009 (Tin) 2 (Lead) 0.05 (Silver) 0.1 Unit= mg/m<sup>3</sup>  
 : Japan society of occupational health 2009 (Tin) --- (Lead) 0.1 (Silver) 0.01 Unit= mg/m<sup>3</sup>  
 Protective equipment  
 Respiratory : Wear protective mask  
 Hands : Wear protective gloves  
 Eyes : Wear protective goggle

Skin and body	:Wear protective work clothing, protective apron and protective boots if needed
Sanitation	: Before eating, drinking and/or smoking, wash hands and gargle well after work.

### 9.PHYSICAL AND CHEMICAL PROPERTIES

Shape, color	:Metal wire
Odo	:None
PH	:Not applicable
Melting point / Freezing point	: 179-211°C(melting point of metal)
Flammability	:Not applicable
Boiling point	:Not applicable
Flash point	:Not applicable
fire spontaneous temperature	:Not applicable
Vapor pressure	:Not applicable
Vapor density (air=1)	: Not applicable
Specific gravity (Relative density)	:7.5
Solubility	: Insoluble

### 10.STABILITY AND REACTIVITY

Chemical stability	: Stable at ordinary storage.
Possibility of hazardous reactions	: Chemical reaction occurs with strong acid, strong oxidizer and the metal.
Conditions to avoid	: Avoid contact with heat, strong acid, strong oxidizers.
Incompatible materials	: strong acid, strong oxidizers.
Hazardous decomposition products	: Lead generates hazardous fume and gases when burning.

### 11.TOXICOLOGICAL INFORMATION

Acute toxicity	: Harmful if inhaled (Rosin dust)
Skin corrosion/ Irritation	: None known
Serious eye damage/eye irritation	: None known
Respiratory sensitization	: respiratory sensitization material (Rosin)
Skin sensitization	: None known
Mutagenicity (Germ cell mutagenicity)	: May cause contact allergic reaction to accessory containing silver.
Carcinogenicity	: May cause chromosomal abnormality/ micronucleus formation effect (Lead)
Reproductive toxicity	: Suspected of causing cancer (Lead)
Specific target organ systemic toxicity - Single exposure	: May cause chromosomal abnormality/ micronucleus formation effect (Lead)
Specific target organ systemic toxicity - Repeated exposure	: May cause respiratory damage(Silver)
Inhalation respiratory organs toxicity	: May cause damage to lungs (Tin)
	: May cause damage to target organs -- hematopoietic system, kidney, central nerves system, peripheral nerve system, cardiovascular system. (Lead)
	: Causes damage to eyes and respiratory(inhalant) through prolonged or repeated exposure(Silver)
	: None known

**12.ECOLOGICAL INFORMATION**

Ecotoxicology	: None known
Persistence /Degradability	: None known
Bio accumulative Potential	: None known
Mobility in soil	: None known
Other adverse effects	: Because of many unknown items do not discard in general environment.

**13.DISPOSAL CONSIDERATIONS**

Dispose of contents/container in accordance with local/regional/national/international regulations  
Metal composition can be recycled.

**14.TRANSPORT INFORMATION**

【international regulations】	
UN classification	: Not applicable to the criteria for classification.
UN Number	: Not applicable
UN proper shipping name	: Not applicable
Packing group	: Not applicable
Marine pollutant	: Not applicable
【 Domestic regulations 】 (JAPAN)	:See “15.REGULATORY INFORMATION”
Special precautions and con- ditions	:Load so that there will be no tumbling, dropping no damaging and securely conduct load collapse prevention.

**15.REGULATORY INFORMATION**

Follow all regulation in your country.	
Industrial Safety and Health Act in Japan	: Substances to be notified, Enforcement Order 18-2) #322 Tin and its compound : Substances to be notified, Enforcement Order 18-2) #411 Lead and its inorganic com- pound : Substances to be notified, Enforcement Order 18-2) #137 Silver and its water-soluble compound : Substances to be notified, Enforcement Order 18-2) #632 Rosin : Ordinance on the Prevention of Lead Poisoning -- Article 1
Air Pollution Control Law in Japan	: Enforcement order Article 1 -- Lead and its compound
Water Pollution Prevention Act in Japan	: Enforcement order Article 2 -- Lead and its compound
Sewerage Law in Japan	: Enforcement order Article 9-4 -- Lead and its compound
Soil Contamination Counter- measures Act in Japan	: Enforcement order Article 1-19 -- Lead and its compound
PRTR in Japan	: The Class I Designated Chemical Substance (#304 Lead) : The Class I Designated Chemical Substance (#82 Silver)
Poisonous and Deleterious Sub- stances Control Law in Japan	: Not applicable
RoHS in EU	: Incompatible --- the Lead is included more than 1000ppm

**16. Other information**

The information herein is given in good faith, but not a warranty. Final determination of suitability any of material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards, which exist.