



Solder Preforms | Engineered Solder Materials

## Safety Data Sheet – Solder Wire with RMA Core – SDS #930

This material safety data sheet represents a group of alloys that are blended with the same flux material to make a rosin mildly activated flux cored wire for soldering applications. Refer to alloy table in section 3 for scope.

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Wire solder with a rosin mildly activated flux core.

**Revised Date:** December 17, 2019

**Product Use:** Electronics & industrial

**MANUFACTURER:**

Array Solders  
152 Myrtle Avenue, Jersey City, NJ 07305  
Information: (201) 997-1333

**EMERGENCY PHONE:**

**CHEMTREC 24 hrs.**  
**USA:** 1(800) 424-9300  
**Outside USA:** +1(703) 527-3887

### 2. HAZARDS IDENTIFICATION

**PRIMARY ROUTES OF ENTRY:**  
Eye, Inhalation, Skin, Ingestion

Carcinogen listed in  
NTP IARC OSHA Not Listed

GHS

Lead Free Products



Signal Word: Warning

Hazard statement(s)

H317 May cause an allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H303 May be harmful if swallowed  
H351 Suspected of causing cancer  
H361 Suspected of damaging fertility or the unborn child  
H373 May cause damage to organs through prolonged or repeated exposure  
H410 Very toxic to aquatic life with long lasting harmful effects  
EUH201A Warning! Contains lead. Review listing.  
EUH208 Contains rosin. May produce an allergic reaction  
Precautionary statement(s)  
P233 Keep container tightly closed  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray  
P270 Do not eat, drink or smoke when using this product  
P273 Avoid release to the environment  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P362 +P364 Take off contaminated clothing and wash before reuse  
P301 + P314 IF SWALLOWED: Get medical advice/attention if you feel unwell  
P302 +P352 IF ON SKIN: Wash with plenty of soap and water  
P304 + 341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305 + 351 IF IN EYES: Rinse continuously with water for several minutes (15 mins)  
P501 Dispose of contents by recycling or thru an approved chemical waste hauler.

#### Lead Containing Products



Signal Word: Warning

Hazard statement(s)

H317 May cause an allergic skin reaction  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H303 May be harmful if swallowed  
H351 Suspected of causing cancer  
H361 Suspected of damaging fertility or the unborn child  
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Classification:

Carcinogenicity (Category 2) (lead)

Reproductive toxicity (Category 2 ) (lead)

Skin sensitizer-Category 1B

Respiratory sensitizer-Category 1B

Acute aquatic toxicity – Category 1 for lead containing products (H400)

Chronic aquatic toxicity – Category 1 for lead containing products (H410)

POTENTIAL HEALTH EFFECTS:

Eye Contact: Irritating to the eyes and if not removed, may result in serious injury.

Contact with fume

from molten metal may cause irritation.

Ingestion: This product contains metal and organic chemicals. May cause irritation.

Inhalation: Inhalation of fume or dust may cause local irritation to the respiratory system. Rosin may cause occupational asthma.

Skin Contact: May cause skin irritation. Rosin may cause dermatitis or sensitization.

Chronic: SILVER: Chronic skin contact or ingestion of silver powder, salts or fume can result in a condition known as Argyria, a condition with bluish pigmentation of the skin and eyes.  
 TIN: Prolonged inhalation of fume may result in lung complications.  
 LEAD: Prolonged exposure to vapors or fumes at higher temperatures may cause respiratory irritation and systematic lead poisoning.  
 Symptoms of lead poisoning include headache, nausea, abdominal pain, muscle and joint pain and damage to the nervous system, blood system and kidneys.

NOTE: Array Solders does not recommend, manufacture, market or endorse any of its products for human consumption.



WARNING: This product can expose you to chemicals including [lead] which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

WARNING: This product may contain lead. Lead may be harmful to your health. US Federal law prohibits the use of leaded solders in making joints or fittings in any private or public water supply system. Keep out of the reach of children.

3. COMPOSITION / INFORMATION ON INGREDIENTS				
Components % wt	CAS Registry #/EINECS#	PEL mg/m <sup>3</sup>	TLV-TWA mg/m <sup>3</sup>	TLV-STEL mg/m <sup>3</sup>
TIN	7440-31-5/231-141-8			
	(US)	2	2	-
	(EU)	-	2	4
	(Canada)	-	2	4
	(Singapore)	2	-	-
SILVER	7440-22-4/231-131-3			
	(US)	0.01	0.1	-
	(EU)	-	0.1	-
	(Canada)	-	0.1	0.3
	(Singapore)	0.1	-	-
	(Mexico)	-	0.1	-

LEAD	*	7439-92-1/231-100-4			
		(US)	0.05	0.05	-
		(EU)	N.E.	0.15	N.E.
		(Canada)	0.05	0.05	N.E.
		(Singapore)	0.15	-	-
		(Mexico)	0.15	-	-
		(China)	-	0.05(dust) 0.03(fume)	-
ANTIMONY	*	7440-36-0/231-146-5			
		(US)	0.5	0.5	-
		(EU)	0.5	-	-
		(Canada)	N.E.	0.5	1.5
		(Singapore)	0.5	-	-
		(Mexico)	0.5	-	-
		(China)	-	0.5	-
Components % wt COPPER	*	CAS Registry #/EINECS# 7440-50-8/231-159-6	PEL	TLV-TWA	TLV-STEL
		(US)	0.1 (fume)	0.2 (fume)	-
		(EU)	-	0.2 (fume)	-
		(Singapore)	0.2(fume)	1(dust)	-
		(Mexico)	-	0.2(fume)	2
		(China)	-	0.2(fume)	0.6
		(Canada)	-	1(dust) 0.2 (fume)	2.5 0.6 (fume)
ROSIN	0.5 - 3.0	65997-05-9	N.E.	N.E.	N.E.
		(EU)	0.05	N.E.	0.15 (sensitiser)
PROPRIETARY	0.5 - 3	-	N.E.	N.E.	N.E.

N.E.= Not Established

### Alloy Table

Alloy	% Tin (sn)	% Silver (ag)	% Lead (pb)	% Antimony (sb)	%Copper (cu)	RoHS 2/3 Compliance (2011/65/EU)
96Sn/4Ag	91-95	3.8-3.94	-	-	-	Yes
62sn/36pb/2ag	58.9-61.4	1.9-1.98	34-35.6	-	-	No
63sn/37pb	59.9-62.4	-	35-36.6	-	-	No
95sn/5sb	90-94	-	-	4.75-4.95	-	Yes
5.5ag/94.5pb	-	5.2-5.4	89.8-93.6	-	-	Yes*
Sac 305 (96.5sn/3ag/,5cu)	91.7-95.5	2.85-2.97	-	-	0.475-0.495	Yes

\* high lead exemption ^RoHS = Restriction of Hazardous Substances  
RoHS 3- products do not contain any listed phthalates

#### 4. FIRST AIDE MEASURES

Eye Contact: Hold eyelids apart and flush eyes with plenty of tepid water for at least 15 minutes. Seek medical attention if irritation persists.

Ingestion: If patient is conscious, ONLY induce vomiting as directed by trained personnel. NEVER give anything by mouth to an unconscious person. Seek medical attention immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing. Wash affected area with soap and water. Wash clothing before reuse. If irritation persists, obtain medical attention.

#### 5. FIRE FIGHTING MEASURES

Flash Point: Not established.

Method: Not established.

Auto-ignition Temperature: Not established.

Flammable Limits: Limits not established.

Extinguishing Media: Use extinguishers appropriate for the surrounding fire conditions.  
Special Fire Fighting Procedures: Firefighters must wear NIOSH approved self-contained breathing apparatus and full protective clothing.

## **6. ACCIDENTAL LEAK MEASURES**

Spill or Leak Procedures: Pick up solids and put in container for reuse or recycling. Do not sweep powder or small particulate. Use vacuum. Reduce airborne dust and prevent scattering by moistening with water. Dispose of following all Federal, State and Local regulations.

## **7. HANDLING & STORAGE**

Handling: Keep containers tightly closed when not in use. Use care to avoid spills. Always thoroughly wash your hands after handling this product. DO NOT touch or rub eyes until hands are washed.

Storage Precautions: Refer to product label for specific storage temperature requirements. Rotate stock to ensure use before expiration date on the label.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Engineering Controls: Exhaust ventilation is recommended to keep exposures below established limits and protect operators. Use proper ventilation when working with leaded products.

Personal protection:

Eyes: Chemical safety glasses/goggles. Face shield for splash hazards.

Respirator: An approved or compliant marked air-purifying respirator with a fume/organic chemical cartridge is recommended under certain circumstances where airborne concentrations are expected to be elevated or exceed exposure limits.

Skin: Compatible chemical resistant gloves may be required for certain applications. Hot gloves as needed for melting applications.

Other: Lab coat, eye-wash fountain in work area. Avoid the use of contact lenses in high fume areas. Follow standard lead work practices when working with lead containing products.

Work/Hygienic: Maintain good housekeeping. Clean up spills immediately. Good personal hygiene is essential. Avoid eating, smoking or drinking in the work area. Wash hands thoroughly with soap and water immediately upon leaving the work area. Follow applicable lead work practices.

## 9. PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Solid metal - wire	Boiling Point:	Not applicable.
Odor:	Odorless	Melting Point:	See table
Specific Gravity:	See table	pH:	Not applicable
Vapor Pressure:	Not established	Solubility in Water:	Insoluble
Vapor Density:	(air=1) Not applicable.		

## 10. STABILITY & REACTIVITY

General:	Stable.
Conditions to Avoid:	Not established.
Incompatible Materials:	Avoid contact with acids, bases or oxidizing agents.
Hazardous Decomposition/Combustion:	Harmful organic fumes and toxic oxide fumes may form at elevated temperatures.
Hazardous Polymerization:	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

Carcinogenicity:	NTP: No
	OSHA: No
	IARC: No.
LD50: Not established.	LC50: Not established.

## 12. ECOLOGICAL INFORMATION

Protect not tested.

## 13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Scrap metal alloy usually has value. Contact a commercial reclaimer for recycling. Otherwise, dispose of in accordance with all Federal, State and Local environmental regulations.

## 14. TRANSPORT INFORMATION

Transport in accordance with applicable international regulations and requirements. Not regulated under US DOT (United States Department of Transportation).

Not hazardous under shipping regulations (USDOT/IATA/IMDG).

UN – none

Not regulated for shipping- ground/IATA/IMDG



## 15. REGULATORY INFORMATION

The information in this Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated hereunder (29 CFR 1910.1200 ET. SEQ.).

In Malaysia:

This product has been classified in accordance with: Malaysian – OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, LABELING AND SAFETY DATA SHEET OF HAZARDOUS CHEMICALS) REGULATION OCTOBER 2013 – (CLASS). (GHS)

In China:

Decree No. 591: Regulations on the Control over Safety of Hazardous Chemicals  
GB 30000.2-29-2013, Rules for classification and labeling of chemicals. (GHS)  
GB/T 16483-2008, GB/T 17517-2013

This product has been classified using the Chinese Occupational Limit for Hazardous Agents in the Workplace, GBZ2-2007.

This product has been classified in accordance with the Mexican regulations NOM-018-STPS-2015 and NOM-010-STPS-2014.

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR).

This product has been classified in accordance with the guidelines set by the Dept of Industrial Health of the Republic of Singapore.

SARA 313 Listing - 40 CFR 372.65  
Silver, Lead, Antimony

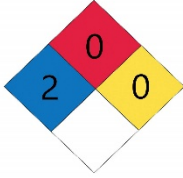
All ingredients are listed on the EPA TSCA Inventory.  
EPA Genetic Toxicology Program – Lead CAS# 7439-92-1



WARNING: This product can expose you to chemicals including [lead] which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## 16. OTHER INFORMATION

HMIS Hazard Rating: Health: 2  
Fire: 0  
Reactivity: 0



Revised Date: 17 DECEMBER 2019  
Prepared by: Liam George, Array Solders  
Approved by: Kevin Pfeifer, Applications Engineer

### Disclaimer:

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