

## Safety Data Sheet

According to Regulation (EC) No. 1907/2006  
with its amendment Regulation (EU) 2015/830



GHS07

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### 1.1. Product Identifier

Product name: L0 HF (Halide Free) No Clean Cored Solder Wire (RoHS Compliant)  
Tin, Tin/Silver, Tin/Silver/Copper Alloys  
(see table in section 9 for alloys available)  
(RoHS Compliant/Reach Compliant) No SVHC's

Product identifier: 856999, 857000, 857024, 857025, 857026, 957027 and 857028

#### 1.2. Relevant Identified uses of the substance or mixture and uses advised against

Description: No clean solder wire for manual and automated soldering.

#### 1.3. Details of the supplier of the safety data sheet

Manufacturer: Rapid Electronics Limited  
Address: Severalls Lane, Colchester, Essex, CO4 5JS  
Telephone: +44 (0)1206 838000  
Website: <http://www.rapidonline.com>

#### 1.4. Emergency telephone number

Telephone: +44 (0)1206 838000 (8am-5pm Monday-Friday)

### 2. HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification - EU Directive:	Skin Sens 1	H317	May cause an allergic skin reaction
Main Hazards:	Resp. Sens. 1	H334	May cause allergy or asthma symptoms of breathing difficulties if inhaled

See Section 11 for more detailed information on health effects and symptoms.

#### 2.2 Label Elements EC 1272/2008 (CLP/GHS)

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

GHS Symbols



GHS07

Signal Word: Warning

Contains colophony (rosin)

Hazard Statements:


H317: May cause an allergic skin reaction.

H334: May cause allergy or asthma symptoms of breathing difficulties if inhaled.

Precautionary Statements:	P261:	Avoid breathing dust/fume/gas/mist/vapours/spray.
	P280:	Wear protective gloves.
	P285:	In case of inadequate ventilation wear respiratory protection.
	P302+P352:	IF ON SKIN, Wash with plenty of soap and water.
	P304+P341:	IF INHALED, if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P333+P313:	If skin irritation or rash occurs, get medical advice/attention.

### 3. COMPOSITION, INFORMATION OR INGREDIENTS

#### 3.1. This material is defined as a mixture

Chemical Name	CAS No	EC No.	REACH Registration Number	Conc.(%w/w)	Classification
Tin	7440-31-5	231-141-8	01-2119486474-28	1-100	-
Silver	7440-22-4	231-131-3	01-2119555669-21	<10	H400: Aquatic Acute 1 H410: Aquatic Chronic 1
Copper	7440-50-8	231-159-6	01-2119480154	<4	H400: Aquatic Acute 1 H411: Aquatic Chronic 2
Antimony	7440-36-0	231-146-5	01-2119475609-24	<6	-
Rosin (Colophony)	8050-09-7	232-475-7	01-2119480418-32	<4	H317: SkinSens 1 

For actual alloy breakdown see section 9. Information on basic physical and chemical properties.

### 4. FIRST AID MEASURES

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Inhalation of solder flux fume (at normal use temperatures) may cause respiratory distress. Remove at once to fresh air. Keep warm and at rest. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If not breathing, give artificial respiration. If unconscious place in the recovery position and get medical attention immediately.
<b>Eye contact</b>	Rosin based solder flux fumes may irritate eyes, Flush eyes with plenty of water. Make sure contaminated water washes away from the face and clear upper and lower eyelids. Continue to rinse for 10 minutes. The flux may spit during soldering. In cases where spitting flux has entered the eye seek medical attention.
<b>Skin contact</b>	Rosin based solder flux fume may cause a skin rash to develop. If any skin rash develops seek medical attention. Wash off with soap and plenty of water. After contact with molten metal, flood the area with cold water and get medical attention if required.
<b>Ingestion</b>	Rinse the mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. If unconscious place in the recovery position. Obtain medical attention immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	Prolonged or repeated exposure may cause an allergic reaction to develop. Prolonged or repeated exposure to the fumes emitted may cause sensitization which could lead to occupational asthma. May cause irritation to respiratory system.
<b>Eye contact</b>	Irritating and abrasive.
<b>Skin contact</b>	May cause irritation to skin.
<b>Ingestion</b>	May cause irritation to sensitive individuals.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Seek medical attention if any symptoms persist.

### 5. FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing Media

Use extinguishing media appropriate to the surrounding fire conditions. Water spray, dry chemical or carbon dioxide. Sand may be used for small fires.

#### 5.2. Special hazards arising from the substance or mixture

Inhalation of the flux fumes given off at soldering temperatures will irritate the nose and throat. The fumes produced by rosin may cause sensitisation by inhalation.

#### 5.3. Advice for Fire Fighters

Do not use water jet. Wear full protective clothing and self-contained breathing apparatus operating in the positive pressure mode.

### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid inhalation of any fume from the hot solder. Avoid contact with hot product. Ensure adequate ventilation of the working area.

#### 6.2. Environmental precautions

Do not allow product to enter drains, soil, waterways and sewers. Prevent further spillage if safe. Ensure solder is collected in suitable containers for disposal accordance with local and national legislation. Refer to section 13 for disposal.

#### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel. Keep in suitable closed containers for disposal. Observe personal hygiene methods.

#### 6.4. Reference to other sections

See section 2,8,13 for further information.

### 7. HANDLING AND STORAGE

#### 7.1. Precautions for safe handling

Ensure adequate ventilation of the working area. The fumes produced during soldering should be extracted away from the breathing zone of the operators using properly designed efficient, well-maintained, local exhaust ventilation. See HSG 258 and INDG 249, HSE publications for further information. Put on appropriate protective equipment (latex gloves or similar). Wash hands with soap and warm water after handling soldering products. Adopt best manual handling considerations when handling, carrying and dispensing. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Keep out of reach of children.

#### 7.2. Precautions for safe storage, including and incompatibilities

Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers. Keep away from direct sunlight. Keep away from food and drink.

#### 7.3. Specific end use(s)

See section 1.2.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### 8.1. Control parameters

8.1.1. Exposure Limit Values	
Tin	2 mg/m <sup>3</sup> 8 hour Time Weighted Average, UK EH40
Rosin	0.15 mg/m <sup>3</sup> over a 15 minute reference period UK EH40: MEL (Skin sensitizer). 0.05 mg/m <sup>3</sup> over an 8 hour reference period.
Silver	0.1 mg/m <sup>3</sup> 8 hour Time Weighted Average, UK EH40
Copper	0.2 mg/m <sup>3</sup> 8 hour Time Weighted Average, UK EH40

### 8.2. Exposure Controls

8.2.1 Appropriate engineering controls	
To achieve adequate control, as required by the COSHH Regulations, extraction should be used to reduce exposure. Extraction should be properly maintained and in good working order. Please use health and safety guidelines to choose suitable extraction.	
8.2.2. Individual protection measures	
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the work day. Wash contaminated clothing before re-use.	
<b>Eye/face protection</b>	Ensure that eye wash stations are close to the work area. Use safety goggles.
<b>Skin/Hand protection</b>	Wear protective clothing. Disposable vinyl gloves. Protective Gloves should be worn.
<b>Biological Standards</b>	The material possesses minimal risk to the environment.

## 9. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

State	Solid
Colour	Grey
Odour	Mild
pH	No data available
Melting point	See table below for melting points for specific alloys
Freezing point	Not available
Boiling point	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability limits	Not available
Vapour flammability	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	Not available
Fat solubility	Not available
Partition coefficient	Not available
Autoignition temperature	Not available
Viscosity	Not available
Solubility	Insoluble in water

## 9.2. Other Information

Conductivity	No data available
Surface Tension	No data available
Gas group	No data available

Alloy Table- please refer to your alloy supplied

Alloy Name	Alloy Breakdown	Melting Temperature °C	Alloy Name	Alloy Breakdown	Melting Temperature °C
Tin	Sn	232	SAC305	Sn96.5Ag3Cu0.5	217-219
96S	Sn96.5Ag3.5	221	SAC300	Sn97Ag3	217-219
96/4	Sn96Ag4	221	SAC3	Sn96.7Ag2.8Cu0.5	217-219
98S	Sn98/Ag2	221-226	SAC2	Sn97.5Ag2Cu0.5	217-219
TSC	Sn95.8Ag3.5Cu0.7	217-219	SAC1	Sn99.2Ag0.3Cu0.5	217-219
SAC405	Sn95.5Ag4Cu0.5	217-219	97C	Sn97Cu3	230-250
Sc100e*	Cu0.5-0.7SnRemainer	227	99C	Sn99.3/Cu0.7	227
LM10A	Sn87Ag10Cu3	214-275	95A	Sb4.5-5.5/Sn Remainder	236-243
SACXP0307*	Sn/Cu0.7/Ag0.3	217			

\*Features anti-oxidant technology

Key: Sn-Tin, Ag-Silver, Cu-Copper, Sb-Antimony

## 10. STABILITY AND REACTIVITY

<b>10.1. Reactivity</b>	No data available on this product
<b>10.2. Stability</b>	Stable under normal conditions.
<b>10.3. Possibility of Hazardous Reactions</b>	Solder will react with strong oxidising agents.
<b>10.4. Conditions to avoid</b>	None.
<b>10.5. Incompatible Materials</b>	Strong oxidizing agents
<b>10.6. Hazardous Decomposition Products</b>	Under normal conditions of use, hazardous decomposition products should not be produced.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

<b>Inhalation</b>	Fumes generated during use may cause sensitisation to the respiratory system and should be extracted away from the operator.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin Contact</b>	Skin contact should be avoided. Rosin can cause sensitisation by skin contact, causing dermatitis.
<b>Eye contact</b>	No data available.
<b>Target Organs</b>	No data available.
<b>Germ cell mutagenicity</b>	No data available.
<b>Carcinogenicity</b>	No data available.

## 12. ECOLOGICAL INFORMATION

<b>12.1. Toxicity</b>	No data available.
<b>12.2. Persistence and degradability</b>	No data available.
<b>12.3. Bio accumulative potential</b>	No data available.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	No data available.
<b>12.6 Other adverse effects</b>	No data available.

## 13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in compliance with all local and national regulations. Empty containers may contain product residue. The product container must be disposed of in a safe way.
Disposal methods	Contact a licensed waste disposal company. Avoid dispersal of spilt material and runoff in contact with soil, waterways.
Disposal and Packaging	Do NOT reuse empty containers. Empty containers can be sent for disposal and recycling.
Further Information	For disposal with the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. 06 04 05 Wastes containing other heavy metals. Hazardous waste.

## 14. TRANSPORT INFORMATION

<b>14.0 Hazard Pictograms</b>	Not hazardous for transport
<b>14.1. UN Number</b>	—
<b>14.2. UN Proper Shipping Name</b>	—
<b>14.3. Transport Hazard Class</b>	
ADR/RID	—
Subsidiary risk	—
IMDG	—
Subsidiary risk	—
IATA	—
Subsidiary risk	—
<b>14.4. Packing Group</b>	
Packing Group	—
—	
<b>14.5. Environmental Hazards</b>	
Environmental hazard	No
Marine Pollutant	No
ADR/RID	
Hazard ID	—
Tunnel Category	—
IMDG	
Ems Code	—
IATA	
Packing Instruction (Cargo)	—
Maximum quantity	—
Packing Instruction (Passenger)	—
Maximum quantity	—

## 15. REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation Specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH).

Restrictions on use None.

Substances of very high concern None.

### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## 16. OTHER INFORMATION

Other Information	This product is REACH and RoHS compliant.
Further Information	The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.



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