

## 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: Rosin-Free 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)  
Product identifier: 856995, 856996, 857029, 857030, 857031, 857032 and 857033

#### 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: Eye Irrit. 2      H319      Causes serious eye irritation

Main Hazards:

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**

Hazard Statements:

H319:

Causes serious eye irritation.


Precautionary Statements:

P280:

Wear protective gloves.

### 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<br>H410: Aquatic Chronic 1   |
| Copper          | 7440-50-8 | 231-159-6 | 01-2119480154             | <4          | H400: Aquatic Acute 1<br>H411: Aquatic Chronic 2   |
| Antimony        | 7440-36-0 | 231-146-5 | 01-2119475609-24          | <6          | -  |
| Carboxylic Acid | 110-94-1  | 203-817-2 | 01-2120264127-58          | <2.5        | H319: Eye Irritation 2  |

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>  | 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> | 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>   | No information available.     |
| <b>Eye contact</b>  | Irritating and abrasive.      |
| <b>Skin contact</b> | May cause irritation to skin. |
| <b>Ingestion</b>    | May cause irritation..        |

#### 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 may irritate the nose and throat.

### 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 and wash hands after handling and before eating, drinking or smoking. 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. Keep out of reach of children.

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

Keep in a cool, dry, well ventilated area. 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   |
| Silver                       | 0.1 mg/ m <sup>3</sup> 8 hour Time Weighted Average, UK EH40 |
| Copper                       | 0.2mg/m <sup>3</sup> 8 hour Time Weighted Average, UK EH40   |
| Carboxylic Acid              | No occupational exposure limit value.                        |

### 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.                 |
| <b>Skin/Hand protection</b>   | Wear protective clothing. Disposable vinyl gloves.<br>Use safety goggles. |
| <b>Biological Standards</b>   | No data available.  |
| <b>Environmental exposure controls</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 should be extracted away from the operator. |
| <b>Ingestion</b>              | No data available.                                |
| <b>Skin Contact</b>           | No data available.                                |
| <b>Eye contact</b>            | Fumes may irritate the eyes.                      |
| <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.   |
| Disposal and Packaging | 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. 10 08 11 Dross and skimmings.                             |

## 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                     | —                           |

