

# Safety Data Sheet

According to 1907/2006/EC, Article 31 REACH

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product Identifier

|              |  |
|--------------|--|
| Product Name | Omega II Rosin Free No Clean Cored Solder Wire (RoHS Compliant)<br>Tin, Tin/Silver, Tin/Silver/Copper Alloys<br>(see table in section 9 for alloys available). |
|--------------|--|

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

|             |  |
|-------------|--|
| Description | No Clean Solder Wire for solder wire for manual soldering. |
|-------------|--|

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

|                    |  |
|--------------------|--|
| Company<br>Address | Allendale Electronics Ltd<br>PCB Soldering Dept.<br>Pindar Road<br>Hoddesdon<br>Hertfordshire<br>EN11 0BZ<br>England |
| Web                | <a href="http://www.pcb-soldering.co.uk">www.pcb-soldering.co.uk</a>   |
| Telephone          | 01992 455924   |
| Fax                | 01992 450781   |
| Email              | <a href="mailto:sales@pcb-soldering.co.uk">sales@pcb-soldering.co.uk</a>   |

### 1.4. Emergency telephone number

|                            |   |
|----------------------------|---|
| Emergency Telephone Number | +44(0)1706 218888 (8am-5pm Monday-Friday) |
|----------------------------|---|

## SECTION 2: Hazards Identification

The hazards given are for the use of the solder wire. This product does not contain rosin and is rosin/colophony free.


### 2.1. Classification of the substance or mixture

|  |  |
|--|--|
| Classification- EU Directive<br>67/548/EEC 1999/45/EC<br>Main Hazards<br>Inhalation<br>Ingestion<br>Skin Contact<br>Eye Contact<br>Environmental | When solder is heated in normal use, the fumes generated may be irritating.<br>May be harmful if swallowed.<br>Molten metal may cause severe damage to the skin.<br>Flux can spit and damage the eye.<br>No information available. |
|--|--|

### 2.2. Label Elements EU Directive 67/548/EEC 1999/45/EC

|   |   |
|---|---|
| Symbols<br>Risk Phrases<br>Safety Phrases | R36 – Irritating to eyes<br>S24 – Avoid Contact with skin<br>S37 – Wear suitable gloves |
|---|---|

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

|   |  |
|---|--|
| Classification- EC 1272/2008<br>Main Hazards  |  |
| GHS Symbols                                   |                 |
| Hazard Statements<br>Precautionary Statements | <b>Signal Word: Warning</b><br>H319: Causes serious eye irritation<br>P280: Wear protective gloves |

## SECTION 3: Composition/Information on ingredients

### 3.1. This material is defined as a mixture 67/548/EEC/1999/45/EC

Omega II Rosin Free No Clean Cored Solder Wire Lead Free (Rohs Compliant) Tin, Tin/Silver, Tin/Silver/Copper Alloys

| Chemical Name         | CAS No     | EC No.    | REACH Registration Number | Conc. (% w/w) | DSD Classification |
|-----------------------|------------|-----------|---------------------------|---------------|--------------------|
| Tin                   | 7440-31-5  | 231-141-8 | 01-2119486474-28-xxxx     | 1-100         | Not classified     |
| Silver                | 7440-22-4  | 231-131-3 | 01-2119555669-21-xxxx     | <5            | Not classified     |
| Copper                | 7440-50-8  | 231-159-6 | 01-2119480154-xxxx        | <2            | Not classified     |
| Carboxylic Acid C4-C6 | 68603-87-2 | 271-678-5 | Not available             | <2.5          | R36                |

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

#### SECTION 4: First Aid Measures

##### 4.1. Description of first aid measures

|              |   |
|--------------|---|
| Inhalation   | 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. |
| Eye contact  | 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.  |
| Skin contact | 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.  |
| Ingestion    | 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

|              |  |
|--------------|--|
| Inhalation   | No information available                       |
| Eye Contact  | May cause irritation to skin.                  |
| Skin Contact | May cause irritation to sensitive individuals. |
| Ingestion    | No information available.                      |

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

|  |  |
|--|--|
|  | Seek medical attention if any symptoms persist |
|--|--|

#### SECTION 5: Firefighting 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. |
|--|---|

#### SECTION 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 |
|--|--|

#### SECTION 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 37 |
|--|--|

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)

Solder wire for manual soldering.

**SECTION 8: Exposure controls/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.   |
| Eye/face protection                    | Ensure that eye wash stations are close to the work area.   |
| Skin / Hand protection                 | Wear protective clothing. Disposable vinyl gloves.<br>Use safety goggles.   |
| Biological Standards                   | No data available   |
| Environmental exposure controls        | The material possesses minimal risk to the environment.   |

**SECTION 9: Information on basic physical and chemical properties**

|                          |                                     |
|--------------------------|-------------------------------------|
| State                    | Solid wire                          |
| Colour                   | Grey                                |
| Odour                    | Mild                                |
| pH                       | No data available                   |
| Melting point            | See section 9 for individual 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                  |

Alloy Table- please refer to your alloy supplied

| Alloy Name | Alloy Breakdown  | Melting Temperature °C |
|------------|------------------|------------------------|
| Tin        | Sn               | 232                    |
| 96S        | Sn96.5Ag3.5      | 221                    |
| 96/4       | Sn96Ag4          | 221                    |
| 98S        | Sn98/Ag2         | 221-226                |
| TSC        | Sn95.8Ag3.5Cu0.7 | 217-219                |
| SAC405     | Sn95.5Ag4Cu0.5   | 217-219                |
| SAC305     | Sn96.5Ag3Cu0.5   | 217-219                |

| Alloy Name | Alloy Breakdown  | Melting Temperature °C |
|------------|------------------|------------------------|
| SAC3       | Sn96.7Ag2.8Cu0.5 | 217-219                |
| SAC2       | Sn97.5Ag2Cu0.5   | 217-219                |
| SAC1       | Sn99.2Ag0.3Cu0.5 | 217-219                |
| 97C        | Sn97Cu3          | 230-250                |
| 99C        | Sn99/Cu1         | 227                    |

Key: Sn-Tin, Pb-Lead, Ag-Silver, Cu-Copper

9.2. Other Information

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

**SECTION 10: Stability and Reactivity**

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

**SECTION 11: Toxicological Information**

|  |   |
|--|---|
| 11.1. Information on toxicological effects |   |
| Inhalation                                 | Fumes should be extracted away from the operator. |
| Ingestion                                  | Skin contact should be avoided.                   |
| Skin Contact                               | Fumes may irritate the eyes.                      |
| Eye contact                                | No information available                          |
| Target Organs                              | No data available.                                |
| Germ cell mutagenicity                     | No data available                                 |
| Carcinogenicity                            | No data available                                 |

**SECTION 12: Ecological Information**

|  |                   |
|--|-------------------|
| 12.1. Toxicity                           |                   |
|  | No data available |
| 12.2. Persistence and degradability      |                   |
|  | No data available |
| 12.3. Bioaccumulative potential          |                   |
|  | No data available |
| 12.4. Mobility in soil                   |                   |
|  | No data available |
| 12.5. Results of PBT and vPvB assessment |                   |
|  | No data available |
| 12.6. Other adverse effects              |                   |
|  | No data available |

**SECTION 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.<br>10 08 11 Dross and skimmings.                          |

**SECTION 14: Transport Information**

|                               |                             |
|-------------------------------|-----------------------------|
| Hazard Pictograms             |                             |
|                               | Not hazardous for transport |
| 14.1. UN Number               |                             |
|                               | -                           |
| 14.2. UN Proper Shipping Name |                             |
|                               | -                           |
| 14.3. Transport Hazard Class  |                             |

|                 |   |
|-----------------|---|
| ADR/RID         | - |
| Subsidiary risk | - |
| IMDG            | - |
| Subsidiary risk | - |
| IATA            | - |
| Subsidiary risk | - |

14.4. Packing Group

|               |   |
|---------------|---|
| Packing Group | - |
|               | - |

14.5. Environmental Hazards

|                      |    |
|----------------------|----|
| 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                | - |

**SECTION 15: Regulatory Information**

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

15.2 Chemical Safety Assessment – A chemical safety assessment has not been carried out for the mixture.

|             |  |
|-------------|--|
| Regulations |  |
|-------------|--|

Commission regulation (EU) No 453/2010 of the 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94. Council Directive 76/769/EEC and Commission Directive 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1907/2006 of the European Parliament and of the council of 18 December 2006 concerning the Regulation, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Directive (EEC) No 793/93 and Commission Regulation (EC) No 1488/94. Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC. (93/105/EC) and 2000/21/EC.

The Health & Safety at Work Act 1974

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No.2677) as amended.

Solder Fume and You INDG248(rev)

MDHS83 Resin acid in rosin (colophony) solder flux fume HSE Books ISBN 0 7176 1363 1

**SECTION 16: Other Information**

|                   |      |
|-------------------|------|
| Other Information | None |
|-------------------|------|

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 related 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. |
|--|--|