# Safety Data Sheet According to 1907/2006/EC, Article 31 REACH

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SECTION 1: Identification of the sub	stance/mixture and of the company/undertaking		
1.1. Product Identifier			
Product Name	Autosol No Clean Cored Solder Wire (RoHS Compliant)		
	Tin, Tin/Silver, Tin/Silver/Copper Alloys		
	(see table in section 9 for alloys available).		
1.2. Relevant Identified uses of the s	substance or mixture and uses advised against		
Description	No Clean Solder Wire for solder wire for hand soldering and automated soldering .		
1.3. Details of the supplier of the sa	fety data sheet		
Company	Allendale Electronics Ltd		
Address	PCB Soldering Dept.		
	Pindar Road		
	Hoddesdon		
	Hertfordshire		
	EN11 0BZ		
	England		
Web	www.pcb-soldering.co.uk		
Telephone	01992 455924		
Fax			
Email	sales@pcb-soldering.co.uk		
1.4 Emergency telephone number			
Emergency Telephone Number	+44(0)1706 218888 (8am-5pm Monday-Friday)		
SECTION 2: Hazards Identification			
The hazards are associated with the	use of the solder wire.		
2.1. Classification of the substance	or mixture		
Classification- EU Directive			
67/548/EEC 1999/45/EC			
Main Hazards	Rosin – May cause sensitization by skin contact. When rosin is heated in normal		
	use, rosin fumes are irritating and may cause respiratory sensitisation by inhalation.		
	Exposure to rosin based solder wires may cause sensitive individuals to develop		
	eczema and/or asthma. Sensitised persons may subsequently show asthmatic		
	symptoms when exposed to atmospheric concentration below the occupational		
	exposure limits. Persons with a history of asthma, allergies or any respiratory		
	problems should not be employed in any process in which the product is used. May		
	cause an allergic skin reaction with repeated exposure.		
Inhalation	The fumes produced by heating rosin when the product is in normal use may cause		
	sensitisation by inhalation,		
Ingestion	sensitisation by inhalation, May be harmful if swallowed.		
Ingestion Skin Contact	sensitisation by inhalation, May be harmful if swallowed. Molten metal may cause severe damage to the skin. Sensitization by skin contact.		
Ingestion Skin Contact	sensitisation by inhalation, May be harmful if swallowed. Molten metal may cause severe damage to the skin. Sensitization by skin contact. Rosin based solder flux and its fume can cause dermatitis.		
Ingestion Skin Contact Environmental	sensitisation by inhalation, May be harmful if swallowed. Molten metal may cause severe damage to the skin. Sensitization by skin contact. Rosin based solder flux and its fume can cause dermatitis. No information available		

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

Symbols			
Risk Phrases	Contains colophony		
	R42- May cause sensitization by inhalation (colophony tume).		
Safety Phrases	R43 – May cause sensitization by skin contact (colophony fume)		
Salety I mases	S24 – Avoid Contact with skin		
	S37 – Wear suitable gloves		
Label Elements EC 1272/2008 (CL	P/GHS)		
Classification- EC 1272/2008			
Main Hazards	Rosin – skin sensitization (Category 1)		
	Rosin -Respiratory sensitization (Category 1)		

**GHS Symbols** GHS07 GHS08 Signal Word: Danger H317: May cause an allergic skin reaction Hazard Statements H334: May cause allergy or asthma symptoms of breathing difficulties if inhaled. P261: Avoid breathing fumes. **Precautionary Statements** P280: Wear protective gloves P285: In case of inadequate ventilation wear respiratory protection. **Precautionary Statement** P302+P352:IF ON SKIN, Wash with plenty of soap and water. Response 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.

# SECTION 3: Composition/Information on ingredients

# 3.1. This material is defined as a mixture

67/548/EEC/19	999/45/EC

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
Rosin –Colophony	8050-09-7	232-475-7	Not available	<10	Xi-Irritant, R43

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.
E a contract	Rosin based solder flux fumes may irritate eyes. Flush eyes with plenty of water.
Eye contact	Make sure contaminated water wasnes away from the face and clear upper and
	lower eyends. Continue to finse for 10 minutes. The hux may spit during soldering.
	Rosin based solder flux fume may cause a skin rash to develop. If any skin rash
Skin contact	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.
	Rinse the mouth with water. Do not induce vomiting. Never give anything by mouth
Ingestion	to an unconscious person. If unconscious place in the recovery position. Obtain
	medical attention immediately.
4.2. Most important symptoms and e	effects, both acute and delayed
Inhalation	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.
Eye Contact	Irritating and abrasive.
Skin Contact	May cause irritation to skin.
Ingestion	May cause irritation to sensitive individuals.
4.3 Indication of any immediate med	lical attention and special treatment needed
	Seek medical attention if any symptoms persist

<b>SECTION 5:</b> 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 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.
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SECTION 6: Accidental Release Me	easures
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
0.0 Mathematical sector distributions	
6.3. Methods and material for contain	nment and cleaning up
	Sweep up and shovel. Keep in suitable closed containers for disposal. Observe
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. 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 incompatabilities 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) Solder wire for hand soldering and automated 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
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	0.2mg/m <sup>3</sup> 8 hour Time Weighted Average, UK EH40
8.2. Exposure Controls	
8.2.1 Appropriate engineering	To achieve adequate control, as required by the COSHH Regulations, extraction
controls	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	Handle in accordance with good industrial hygiene and safety practice. Wash hands
measures	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.
	Use safety goggles.
Biological Standards	No data available
Environmental exposure controls	The material possesses minimal risk to the environment.
	Protective Gloves should be worn

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

State Solid wire

Colour	Grey
Odour	Mild
pH	No data available
Melting point	See section below 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

July Tuble p	ieaee ieiei te jear allej eap	plica			
Allov Name	Allov Breakdown	Melting Temperature °C	Allov Name	Allov Breakdown	Melting Temperature <sup>o</sup> C
, moy nume	, moy Broandown	moning remperature o	, and , realine	, moy Broandown	moning remperature e
Tin	Sn	232	SAC305	Sn96 5Ad3Cu0 5	217-219
1.0.1	011	202	0/10000	01100.0/190000.0	211 210
965	Sn96.5Ag3.5	221	SAC300	Sn97Ag3	217-219
000	eneener igene		0	e	= =
96/4	Sn96Aq4	221	SAC3	Sn96.7Ag2.8Cu0.5	217-219
001	e		0	e	= =
98S	Sn98/Aa2	221-226	SAC2	Sn97.5Ag2Cu0.5	217-219
000	eee./g=		0/102	enerie geedele	= =
TSC	Sn95.8Ag3.5Cu0.7	217-219	SAC1	Sn99.2Aq0.3Cu0.5	217-219
SAC405	Sn95.5Ag4Cu0.5	217-219	97C	Sn97Cu3	230-250
So100o*	Cull F 0 7SnBomoinor	217 210	000	Sp00/Cu1	227
Scrube	Guu.5-0.7 Shkemainei	211-219	330	31199/UU1	221

Key: Sn-Tin, Pb-Lead, Ag-Silver, Cu-Copper \*Features anti-oxidant technology

#### 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

Solder will react with strong oxidising agents.	
None	
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 generated during use may cause sensitisation to the respiratory system and
Ingestion	should be extracted away from the operator.
Skin Contact	Skin contact should be avoided.
Eye contact	No information available.
Target Organs	No information 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. 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.

# 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		

### 14.5. Environmental Hazards

Environmental hazard	No
Marine Pollutant	No

# ADR/RID

Packing Group

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),

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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 at present
Further Information	
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.