

Safety Data Sheet

According to 1907/2006/EC, Article 31 REACH



GS Metal Joining Ltd
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product Name	Autosol No Clean Cored Solder Wire Tin, Tin/Silver, Tin/Silver/Copper Alloys (see table in section 9 for alloys available) (RoHS Compliant/Reach Compliant) No SVHC's
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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 and automated soldering For Industrial Use.
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1.3. Details of the supplier of the safety data sheet

Company Address	GS Metal Joining Ltd 154 Mandalay Road, Pleasley, Mansfield NG19 7TJ England
Web	www.gsmetaljoining.co.uk
Telephone	01623 707954
Fax	
Email	enquiries@gsmetaljoining.co.uk
Email of competent person	glen@gsmetaljoining.co.uk

1.4. Emergency telephone number

Emergency Telephone Number	+44(0)1623 707954 (9am-5pm Monday-Friday)
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SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

Classification- EU Directive Main Hazards	Rosin – May cause sensitization by skin contact (fume). 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	May be harmful if swallowed.
Skin Contact	Molten metal may cause severe damage to the skin. Sensitization by skin contact. Rosin based solder flux and its fume can cause dermatitis.
Environmental	No information available.

2. Label Elements EC 1272/2008 (CLP/GHS)

Classification- EC 1272/2008

Main Hazards	Rosin - Skin Sensitization (Category 1) Rosin - Respiratory Sensitization (Category 1)
GHS Symbols	  GHS07 GHS08
Hazard Statements	Signal Word: Danger Contains colophony (rosin) H317: May cause an allergic skin reaction H334: May cause allergy or asthma symptoms of breathing difficulties if inhaled.
Precautionary Statements	P261: Avoid breathing fumes. 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.

SECTION 3: Composition/Information on ingredients

3.1. This material is defined as a mixture

67/548/EEC/1999/45/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	H400: Aquatic Acute 1 H412: Aquatic Chronic 3
Rosin (Colophony)	8050-09-7	232-475-7	Not available	<10	H317: Skin Sens 1

For actual alloy breakdown 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	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.
Skin contact	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.
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	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 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 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.

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. 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 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)

Solder wire for manual and automated soldering.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values

Tin	2 mg/ m ³ 8 hour Time Weighted Average, UK EH40
Rosin	0.15 mg/ m ³ over a 15 minute reference period UK EH40: MEL (Skin sensitizer). 0.05 mg/m ³ over an 8 hour reference period
Silver	0.1 mg/ m ³ 8 hour Time Weighted Average, UK EH40
Copper	0.2mg/m ³ 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.
Eye/face protection	Ensure that eye wash stations are close to the work area. Use safety goggles.
Skin / Hand protection	Wear protective clothing. Disposable vinyl gloves. Protective Gloves should be worn.
Biological Standards	The material possesses minimal risk to the environment.

SECTION 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
Tin	Sn	232
96S	Sn96.5Ag3.5	221
Sn96.3Ag3.7	Sn96.3Ag3.7	221
96/4	Sn96Ag4	221
98S	Sn98/Ag2	221-226
TSC	Sn95.8Ag3.5Cu0.7	217-219
SAC405	Sn95.5Ag4Cu0.5	217-219
Sc100e*	Cu0.5-0.7SnRemainer	227
LM10A	Sn87Ag10Cu3	214-275

Alloy Name	Alloy Breakdown	Melting Temperature °C
SAC305	Sn96.5Ag3Cu0.5	217-219
SAC300	Sn97Ag3	217-219
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	Sn99.3/Cu0.7	227
95A	Sb4.5-5.5/Sn Remainder	236-243
SACXP0307*	Sn/Cu0.7/Ag0.3	217

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

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 generated during use may cause sensitisation to the respiratory system and should be extracted away from the operator.
Ingestion	Skin contact should be avoided.
Skin Contact	No information available.
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. Bio accumulative 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
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14.1. UN Number

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14.2. UN Proper Shipping Name

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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	-
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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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out for this product.

Regulations	
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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 Lead at Work Regulations 2002 (SI 2002 No.2676)

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

HSE Control of Lead at Work Regulations 2002- Approved Code of Practise and Guidance L132 and HSE Leaflet 'Lead and You'. INDG 305, Sep 2003.

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

	This product is REACH and RoHS compliant.
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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.
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