SAFETY DATA SHEET

SAC 305 RS No Clean/122 White

Cookson Electronics ASSEMBLY MATERIALS

CP1311 v1.1 RS 445-5836, 445-5842, 445-5858 **RS REACh revision date 01/08/10**

1. Identification of the preparation and of the company

Product name : **SAC 305 RS No Clean/122 White**

Code : **55762**

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Material uses : soldering

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2 Hazards identification

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : Not classified.

Effects and symptoms

Inhalation May be harmful by inhalation after often repeated exposure.

Ingestion : May be harmful if swallowed.

Skin contact : Slightly hazardous by the following route of exposure: of skin contact (irritant).

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Toxicity data : **Rosin**: Caution: exposure to this material may cause certain sensitive individuals to develop eczema and/or asthma. Sensitised persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.
May cause allergic skin reactions with repeated exposure. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used.

Additional warning phrases : Contains rosin. May produce an allergic reaction. Safety data sheet available for professional user on request.

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

3 Composition/information on ingredients

Substance/preparation : Preparation

Ingredient name	CAS number	%	EC number	Classification
Europe				
tin	7440-31-5	80 - 100	231-141-8	Not classified.
silver	7440-22-4	1 - 5	231-131-3	Not classified.
rosin	8050-09-7	1 - 5	232-475-7	R43
See section 16 for the full text of the R-phrases declared above				

Occupational exposure limits, if available, are listed in section 8.

The classifications listed, indecate the potential hazards of the ingredients

4. First-aid measures

First-aid measures

Inhalation : If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately.

Ingestion : Wash out mouth with water. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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

5. Fire-fighting measures

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : No specific fire or explosion hazard.

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : Keep unnecessary personnel away. Use suitable protective equipment (section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Packaging materials

Recommended : Not applicable

8. Exposure controls/personal protection

Exposure limit values

Ingredient name	Occupational exposure limits
Europe	
tin	**ACGIH TLV (United States, 1/2008).** TWA: 2 mg/m³ 8 hour(s).
silver	**EU OEL (Europe, 4/2006). Notes: Indicative** Limit value: 0.1 mg/m³ 8 hour(s).
Sweden	
silver	**AFS 2005:17 (Sweden, 6/2007).** TWA: 0.1 mg/m³ 8 hour(s). Form: total dust
Denmark	
silver	**Arbejdstilsynet (Denmark, 3/2008). Notes: calculated as Ag** TWA: 0.01 mg/m³, (calculated as Ag) 8 hour(s). Form: powder and dust
Norway	
silver	**Arbeidstilsynet (Norway, 11/2007).** TWA: 0.1 mg/m³ 8 hour(s). Form: dust and fume
France	
silver	**INRS (France, 12/2007). Notes: Regulatory indicative exposure limits** TWA: 0.1 mg/m³ 8 hour(s).
rosin	**INRS (France, 12/2007). Notes: indicative exposure limits** TWA: 0.1 mg/m³ 8 hour(s).
Netherlands	
silver	**MinSZW Wettelijke Grenswaarden (Netherlands, 4/2008). Notes: Administrative** MAC-TGG, 8 uur: 0.1 mg/m³ 8 hour(s).
Germany	
silver	**TRGS900 AGW (Germany, 7/2008).** PEAK: 0.8 mg/m³ 15 minute(s). Form: inhalable fraction TWA: 0.1 mg/m³ 8 hour(s). Form: inhalable fraction
Finland	
tin	**Työterveyslaitos (Finland, 2002).** TWA: 2 mg/m³ 8 hour(s). **Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007). Notes: calculated as Sn** TWA: 2 mg/m³, (calculated as Sn) 8 hour(s).
silver	**Työterveyslaitos (Finland, 2002).** TWA: 0.1 mg/m³ 8 hour(s). **Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007).** TWA: 0.1 mg/m³ 8 hour(s).
United Kingdom (UK)	
tin	**EH40-OES (United Kingdom (UK), 2002).** TWA: 2 mg/m³ 8 hour(s). STEL: 4 mg/m³ 15 minute(s).
silver	**EH40/2005 WELs (United Kingdom (UK), 8/2007).** TWA: 0.1 mg/m³ 8 hour(s).
rosin	**EH40-MEL (United Kingdom (UK), 2002). Skin sensitiser. Inhalation sensitiser.** TWA: 0.05 mg/m³ 8 hour(s). Form: Rosin-based solder flux fume STEL: 0.15 mg/m³ 15 minute(s). Form: Rosin-based solder flux fume
Austria	

8. Exposure controls/personal protection

tin	**GKV_MAK (Austria, 9/2007).** STEL: 4 mg/m³, 4 times per shift, 15 minute(s). Form: inhalable fraction TWA: 2 mg/m³ 8 hour(s). Form: inhalable fraction
silver	**GKV_MAK (Austria, 9/2007).** STEL: 0.1 mg/m³, 1 times per shift, 30 minute(s). Form: inhalable fraction TWA: 0.1 mg/m³ 8 hour(s). Form: inhalable fraction
Switzerland	
silver	**SUVA (Switzerland, 1/2007). Notes: not temporary** STEL: 0.8 mg/m³ 15 minute(s). Form: inhalable dust TWA: 0.1 mg/m³ 8 hour(s). Form: inhalable dust
Belgium	
tin	**Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Absorbed through skin.** TWA: 2 mg/m³ 8 hour(s).
silver	**Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007).** TWA: 0.1 mg/m³ 8 hour(s).
Spain	
tin	**INSHT (Spain, 1/2008).** TWA: 2 mg/m³ 8 hour(s).
silver	**INSHT (Spain, 1/2008).** TWA: 0.1 mg/m³ 8 hour(s).
Turkey	
tin	**NIOSH REL (United States, 6/2008).** TWA: 2 mg/m³ 10 hour(s).
silver	**TR ISGGM OEL (Turkey, 3/2008).** TWA: 0.1 mg/m³ 8 hour(s).
rosin	**NIOSH REL (United States, 6/2008). Notes: as formaldehyde** TWA: 0.1 mg/m³, (as formaldehyde) 10 hour(s).
Czech Republic	
silver	**178/2001 (Czech Republic, 12/2007).** STEL: 0.3 mg/m³ 15 minute(s). TWA: 0.1 mg/m³ 8 hour(s).
rosin	**178/2001 (Czech Republic, 12/2007). Skin sensitiser.** TWA: 1 mg/m³ 8 hour(s).
Ireland	
silver	**NAOSH (Ireland, 8/2007).** OELV-8hr: 0.1 mg/m³ 8 hour(s).
Italy	
tin	**ACGIH TLV (United States, 1/2008).** TWA: 2 mg/m³ 8 hour(s).
silver	**Ministero della Salute (Italy, 4/2008).** TWA: 0.1 mg/m³ 8 hour(s).
Estonia	
silver	**Sotsiaalminister (Estonia, 10/2007).** TWA: 0.1 mg/m³ 8 hour(s).
Lithuania	
silver	**Del Lietuvos Higienos Normos (Lithuania, 10/2007).** TWA: 0.1 mg/m³ 8 hour(s).
Slovakia	
silver	**Nariadenie Vlády Slovenskej republiky (Slovakia, 6/2007).** TWA: 0.1 mg/m³ 8 hour(s).
Hungary	
silver	**EüM-SzCsM (Hungary, 12/2007).** PEAK: 0.4 mg/m³ 15 minute(s). TWA: 0.1 mg/m³ 8 hour(s).

8. Exposure controls/personal protection

Poland	
tin	**Ministra Pracy i Polityki Społecznej (Poland, 9/2007). Notes: calculated as Sn** TWA: 2 mg/m³, (calculated as Sn) 8 hour(s). Form: smokes and dusts
silver	**Ministra Pracy i Polityki Społecznej (Poland, 9/2007).** TWA: 0.05 mg/m³ 8 hour(s). Form: smokes and dusts
Slovenia	
silver	**EU OEL (Europe, 4/2006). Notes: Indicative** Limit value: 0.1 mg/m³ 8 hour(s).
Latvia	
silver	**LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007).** TWA: 0.1 mg/m³ 8 hour(s).
rosin	**LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007).** TWA: 4 mg/m³ 8 hour(s).
Greece	
tin	**PD 90/1999 (Greece, 8/2007).** TWA: 2 mg/m³ 8 hour(s).
silver	**PD 90/1999 (Greece, 8/2007).** TWA: 0.1 mg/m³ 8 hour(s).
Portugal	
tin	**Instituto Português da Qualidade (Portugal, 3/2007).** TWA: 2 mg/m³ 8 hour(s).
silver	**Instituto Português da Qualidade (Portugal, 3/2007).** TWA: 0.1 mg/m³ 8 hour(s).

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Exposure controls

Occupational exposure controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: None assigned.

Hand protection : None assigned.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: safety glasses with side-shields EN 166 1F

Skin protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: overall

8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

General information

Appearance

Physical state : Solid.

Colour : Silvery.

Important health, safety and environmental information

Melting point : 217°C (422.6°F)

Solubility : Insoluble in the following materials: cold water and hot water.

VOC content : 0 % (w/w)

10. Stability and reactivity

Stability : The product is stable.

Conditions to avoid : No specific data.

Materials to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Eye contact : No known significant effects or critical hazards.

Acute toxicity

Over-exposure signs/symptoms

Target organs : Contains material which may cause damage to the following organs: mucous membranes, upper respiratory tract, skin, eye, lens or cornea, nose/sinuses.

12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
silver	-	Acute EC50 9.2 ppb Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 9.5 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute EC50 0.24 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 0.0062 mg/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 145 mm	96 hours

12. Ecological information

	-	Acute LC50 15 to 18 ug/L Fresh water	Crustaceans - Water flea - Simocephalus vetulus - <24 hours	48 hours
	-	Acute LC50 14 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <24 hours	48 hours
	-	Acute LC50 11 to 14 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia reticulata - <4 hours	48 hours
	-	Acute LC50 6.42 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 6.28 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 6.25 to 7.3 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 4.7 to 5.62 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 3.42 to 4.05 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 3.12 to 3.73 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 2.76 to 3.33 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 2.38 to 3.04 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours
	-	Acute LC50 2.13 to 2.93 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - <24 hours	96 hours

Biodegradability

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

European waste catalogue (EWC) : 10 08 11 dross and skimmings other than those mentioned in 10 08 10

Hazardous waste : Yes.

14. Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Risk phrases : This product is not classified according to EU legislation.

Product use : Industrial applications.

Other EU regulations

Additional warning phrases : Contains rosin. May produce an allergic reaction. Safety data sheet available for professional user on request.

France

Professional disease or diseases : rosin 65, 66

Germany

Hazard class for water : nwg Appendix No. 4

Technical instruction on air quality control : TA-Luft Number 5.2.1: 100%
TA-Luft Class III - Number 5.2.2: 0.5%

Italy

Emission control directive : Not classified.

16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Europe : R43- May cause sensitisation by skin contact.

Full text of classifications referred to in sections 2 and 3 - Europe : None assigned.

History

Date of printing : **29/06/2010.**

Date of issue : **29/06/2010.**

16. Other information

Date of previous issue : **21/11/2008.**

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Prepared by : Simon Hosken
Environmental, Health and Safety Manager

Indicates information that has changed from previously issued version.

References

The Health and Safety At Work Act 1974, section 6.
Control of Substances Hazardous to Health (CoSHH) Regulations 2002 and its amendments.

Preparation contains soley TSCA and REACh 1907/2006 listed substances.

This safety data sheet has been prepared in accordance with the requirements of the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 which implement EC Directives 1999/45/EC and 2001/58/EC and their amendments.

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.