

SAFETY DATA SHEET

Sn63 Pb37 Alpha FT-2002 Rosin Free/114

Cookson Electronics ASSEMBLY MATERIALS

CP1383 v1.0 RS 443-0556, 443-0562, 443-0578

RS REACH revision date 01/08/10

1. Identification of the preparation and of the company

Product name : Sn63 Pb37 Alpha FT-2002 Rosin Free/114**Code** : 51016, 51017, 51018**Head Office** : **Cookson Electronics**
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Birchington Road, Corby, Northants, NN17 9RS.
Tel: +44 (0) 1536 402888 (8am to 8pm)
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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 if inhaled.
Ingestion : May be harmful if swallowed.
Skin contact : Non-irritant to skin.**Toxicity data** : **lead**: Warning! Contains lead.
Over-exposure signs/symptoms:- blood formation impairment, central nervous system depression
May cause harm to the unborn child.
Repeated or prolonged exposure to the substance can produce reproductive system damage.**Additional warning phrases** : 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 lead	7440-31-5 7439-92-1	60 - 80 30 - 40	231-141-8 231-100-4	Not classified. Repr. Cat. 1; R61 Repr. Cat. 3; R62 Xn; R20/22 R33 N; R50/53
See section 16 for the full text of the R-phrases declared above				

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3 Composition/information on ingredients

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

The classifications listed, indicate the potential hazards of the ingredients

4. First-aid measures

First-aid measures

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. 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.
- Ingestion** : Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- 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** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment (see 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.
- Packaging materials**
- Recommended** : Use original container.

8. Exposure controls/personal protection

Exposure limit values

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
Europe	
tin	ACGIH TLV (United States, 1/2008). TWA: 2 mg/m ³ 8 hour(s).
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
Sweden	
lead	AFS 2005:17 (Sweden, 6/2007). TWA: 0.05 mg/m ³ 8 hour(s). Form: respirable dust TWA: 0.1 mg/m ³ 8 hour(s). Form: total dust
Denmark	
lead	Arbejdstilsynet (Denmark, 3/2008). Notes: calculated as Pb TWA: 0.05 mg/m ³ , (calculated as Pb) 8 hour(s). Form: powder, dust, fume
Norway	
lead	Arbejdstilsynet (Norway, 11/2007). Reproductive toxin. Notes: calculated as Pb TWA: 0.05 mg/m ³ , (calculated as Pb) 8 hour(s). Form: dust and fume
France	
lead	INRS (France, 12/2007). Notes: Regulatory binding exposure limits TWA: 0.1 mg/m ³ 8 hour(s).
Netherlands	
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
Germany	
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
Finland	
tin	Työterveyslaitos (Finland, 2002). TWA: 2 mg/m ³ 8 hour(s).
	Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007). Notes: calculated as Sn TWA: 2 mg/m ³ , (calculated as Sn) 8 hour(s).
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
United Kingdom (UK)	

8. Exposure controls/personal protection

tin	EH40-OES (United Kingdom (UK), 2002). TWA: 2 mg/m ³ 8 hour(s). STEL: 4 mg/m ³ 15 minute(s).
lead	EH40-OES (United Kingdom (UK), 2002). TWA: 0.15 mg/m ³ 8 hour(s). EH40/2005 WELs (United Kingdom (UK), 8/2007). TWA: 0.15 mg/m ³ 8 hour(s).
Austria	
tin	GKV_MAK (Austria, 9/2007). STEL: 4 mg/m ³ , 4 times per shift, 15 minute(s). Form: inhalable fraction TWA: 2 mg/m ³ 8 hour(s). Form: inhalable fraction
lead	GKV_MAK (Austria, 9/2007). STEL: 0.4 mg/m ³ , 4 times per shift, 15 minute(s). Form: inhalable fraction TWA: 0.1 mg/m ³ 8 hour(s). Form: inhalable fraction
Switzerland	
lead	SUVA (Switzerland, 1/2007). STEL: 0.8 mg/m ³ 15 minute(s). Form: inhalable dust TWA: 0.1 mg/m ³ 8 hour(s). Form: inhalable dust
Belgium	
tin	Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Absorbed through skin. TWA: 2 mg/m ³ 8 hour(s).
lead	Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Notes: as Pb TWA: 0.15 mg/m ³ , (as Pb) 8 hour(s). Form: dust and fume
Spain	
tin	INSHT (Spain, 1/2008). TWA: 2 mg/m ³ 8 hour(s).
lead	INSHT (Spain, 1/2008). TWA: 0.15 mg/m ³ 8 hour(s).
Turkey	
tin	NIOSH REL (United States, 6/2008). TWA: 2 mg/m ³ 10 hour(s).
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
Czech Republic	
lead	178/2001 (Czech Republic, 12/2007). STEL: 0.2 mg/m ³ 15 minute(s). TWA: 0.05 mg/m ³ 8 hour(s).
Ireland	
lead	NAOSH (Ireland, 8/2007). OELV-8hr: 0.15 mg/m ³ 8 hour(s).
Italy	
tin	ACGIH TLV (United States, 1/2008). TWA: 2 mg/m ³ 8 hour(s).
lead	Ministero della Salute (Italy, 4/2008). TWA: 0.15 mg/m ³ 8 hour(s).
Estonia	
lead	Sotsiaalminister (Estonia, 10/2007). TWA: 0.05 mg/m ³ 8 hour(s). Form: inhalable dust TWA: 0.1 mg/m ³ 8 hour(s). Form: total dust
Lithuania	
lead	Del Lietuvos Higienos Normos (Lithuania, 10/2007). TWA: 0.07 mg/m ³ 8 hour(s). Form: alveolar TWA: 0.15 mg/m ³ 8 hour(s). Form: respirable

8. Exposure controls/personal protection

Slovakia

lead **Nariadenie vlády Slovenskej republiky (Slovakia, 6/2007).**
TWA: 0.15 mg/m³ 8 hour(s).

Hungary

lead **EÜM-SzCsM (Hungary, 12/2007). Skin sensitiser. Notes: as Pb**
PEAK: 0.6 mg/m³, (as Pb) 15 minute(s). Form: Respirable
TWA: 0.15 mg/m³, (as Pb) 8 hour(s). Form: Respirable
EÜM-SzCsM (Hungary, 12/2007). Skin sensitiser.
TWA: 0.05 mg/m³, (as Pb) 8 hour(s). Form: respirable dust
PEAK: 0.2 mg/m³, (as Pb) 15 minute(s). Form: respirable dust

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

lead **Ministra Pracy i Polityki Społecznej (Poland, 9/2007). Notes: calculated as Pb**
TWA: 0.05 mg/m³, (calculated as Pb) 8 hour(s).

Slovenia

lead **Uradni list Republike Slovenije (Slovenia, 6/2007).**
TWA: 0.1 mg/m³ 8 hour(s). Form: inhalable fraction

Latvia

lead **LV Nat. Standardisation and Meteorological Centre (Latvia, 5/2007).**
STEL: 0.01 mg/m³ 15 minute(s).
TWA: 0.005 mg/m³ 8 hour(s).

Greece

tin **PD 90/1999 (Greece, 8/2007).**
TWA: 2 mg/m³ 8 hour(s).

lead **PD 90/1999 (Greece, 8/2007).**
TWA: 0.15 mg/m³ 8 hour(s).

Portugal

tin **Instituto Português da Qualidade (Portugal, 3/2007).**
TWA: 2 mg/m³ 8 hour(s).

lead **Instituto Português da Qualidade (Portugal, 3/2007).**
TWA: 0.05 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.

8. Exposure controls/personal protection

- 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: particulate filter EN 149:2001 FFP3
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- 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: face shield EN 166 3 9 -B
- 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
- 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** : 183 to 185°C (361.4 to 365°F)
- Solubility** : Insoluble in the following materials: cold water and hot water.
- VOC content** :

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: blood, kidneys, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

11. Toxicological information

Product name	List name	Name on list	Classification	Notes
United Kingdom (UK) lead	UK Occupational Exposure Limits EH40 - WEL	lead	Carc.	
Netherlands lead	Netherlands Reprotoxic Chemicals	lood Metallisch	Repro. fertility category 3, Dev. breast feeding (X), Dev. development category 1	
Germany lead	Germany TRGS905	Blei Metall, bioverfügbar	RF3, RE1	
France lead	France Occupational Exposure Limits	plomb Métallique	Carc. C1, Carc. C2, Carc. C3, Repro. R1, Repro. R2, Repro. R3	

12. Ecological information

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
lead	-	Acute IC50 17.86 mg/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <48 hours	48 hours
	-	Acute IC50 12.3 mg/L Marine water	Crustaceans - Amphipod - Ampelisca abdita	48 hours
	-	Acute IC50 11.3 mg/L Marine water	Crustaceans - Amphipod - Ampelisca abdita	48 hours
	-	Acute IC50 >6.8 mg/L Marine water	Crustaceans - Amphipod - Ampelisca abdita	48 hours
	-	Acute IC50 6.09 mg/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <48 hours	48 hours

12. Ecological information

-	Acute IC50 >2.5 mg/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <48 hours	48 hours
-	Acute LC50 1.17 mg/L Fresh water	Fish - Rainbow trout, donaldson trout - Oncorhynchus mykiss - 145 mm	96 hours
-	Acute LC50 38829 ppb Marine water	Fish - Inland silverside - Menidia beryllina	96 hours
-	Acute LC50 26150 to 44761 ppb Marine water	Fish - Inland silverside - Menidia beryllina	96 hours
-	Acute LC50 1.33 ppm Fresh water	Fish - common carp - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling) - 6.5 cm	96 hours
-	Acute LC50 0.8 ppm Fresh water	Fish - common carp - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling) - 6.5 cm	96 hours
-	Acute LC50 0.44 ppm Fresh water	Fish - common carp - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling) - 3.5 cm	96 hours
-	Acute LC50 40000 ug/L Fresh water	Fish - Goldfish - Carassius auratus	96 hours
-	Acute LC50 29000 ug/L Fresh water	Fish - Smallmouth bass - Micropterus dolomieu - Fingerling	96 hours
-	Acute LC50 5100 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <24 hours	48 hours
-	Acute LC50 5010 ug/L Marine water	Crustaceans - Brine shrimp - Artemia salina	48 hours
-	Acute LC50 4500 to 5500 ug/L Fresh water	Crustaceans - Water flea - Simocephalus vetulus - <24 hours	48 hours
-	Acute LC50 4460 ug/L Marine water	Crustaceans - Indian prawn - Penaeus indicus - 6 to 9 cm	48 hours

12. Ecological information

-	Acute LC50 4400 to 5300 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
-	Acute LC50 2800 ug/L Fresh water	Fish - Smallmouth bass - Micropterus dolomieu - Swim-up	96 hours
-	Acute LC50 2200 ug/L Fresh water	Fish - Smallmouth bass - Micropterus dolomieu - Swim-up	96 hours
-	Acute LC50 933 to 1200 ug/L Marine water	Crustaceans - Fleshy prawn - Penaeus chinensis	48 hours
-	Acute LC50 530 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia reticulata - <4 hours	48 hours

Biodegradability

Other adverse effects

: No known significant effects or critical hazards.

AOX

: The product does not contain organically bound halogens which could lead to an AOX value in waste water.

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 04 02* dross and skimmings from primary and secondary production

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 : Safety data sheet available for professional user on request.

France

Professional disease or diseases : lead RG 1

Germany

Hazard class for water : nwg Appendix No. 4

Technical instruction on air quality control : TA-Luft Number 5.2.1: 63%
TA-Luft Class II - Number 5.2.2: 37%

Italy

Emission control directive : Not classified.

16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Europe : R61- May cause harm to the unborn child.
R62- Possible risk of impaired fertility.
R20/22- Also harmful by inhalation and if swallowed.
R33- Danger of cumulative effects.
R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications referred to in sections 2 and 3 - Europe : Repr. Cat. 1 - Toxic to reproduction category 1
Repr. Cat. 3 - Toxic to reproduction category 3
Xn - Harmful
N - Dangerous for the environment

History

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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 solely 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

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

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.

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