

SAFETY DATA SHEET



Cookson Electronics ASSEMBLY MATERIALS

Powerflow Wire 3mm

1. Identification of the preparation and of the company

Product name : Powerflow Wire 3mm**Code** : 20775**Head Office** : **Cookson Electronics**
Forsyth Road
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GU21 5RZ
Tel: +44(0)1483 758400
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Materials Group
Naarden Manufacturing Site
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The Netherlands
Tel: +31 (35) 695 5411
Fax: +31 (35) 694 8451**Contact person** : shosken@cooksonelectronics.com**Material uses** : soldering

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 fatal if inhaled.**Ingestion** : May be fatal 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				
lead	7439-92-1	60 - 80	231-100-4	Not classified.
tin	7440-31-5	20 - 30	231-141-8	Not classified.
antimony	7440-36-0	1 - 5	231-146-5	T; R25
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, indicate the potential hazards of the ingredients

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4. First-aid measures

First-aid measures

- Skin contact** : Flush contaminated skin with plenty of water. Cuts should be treated promptly and covered.
- Eye contact** : Get medical attention if any damage to the eye is caused by the metal.
- 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** : No special protection is required.

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.
- Environmental precautions** : No specific hazard.
- Large spill** : Restack safely. Take care with items that are sharp or heavy. Note: see section 1 for emergency contact information and section 13 for waste disposal.
- Small spill** : Restack safely. Take care with items that are sharp or heavy.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Workers should wash hands and face before eating, drinking and smoking. Take care with items that are sharp or heavy.
- Storage** : Store in accordance with local regulations. Keep away from food, drink and animal feeding stuffs. 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	
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
tin	ACGIH TLV (United States, 1/2008). TWA: 2 mg/m ³ 8 hour(s).
antimony	ACGIH TLV (United States, 1/2008). Notes: as Sb TWA: 0.5 mg/m ³ , (as Sb) 8 hour(s).
Sweden	

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8. Exposure controls/personal protection

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
antimony	AFS 2005:17 (Sweden, 6/2007). TWA: 0.5 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
antimony	Arbejdstilsynet (Denmark, 3/2008). Notes: calculated as Sb TWA: 0.5 mg/m ³ , (calculated as Sb) 8 hour(s). Form: powder
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
antimony	Arbejdstilsynet (Norway, 11/2007). Carcinogen. TWA: 0.5 mg/m ³ 8 hour(s).
France	
lead	INRS (France, 12/2007). Notes: Regulatory binding exposure limits TWA: 0.1 mg/m ³ 8 hour(s).
antimony	INRS (France, 12/2007). Notes: indicative exposure limits TWA: 0.5 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).
antimony	MinSZW Wettelijke Grenswaarden (Netherlands, 4/2008). Notes: Administrative MAC-TGG, 8 uur: 0.5 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	
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
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).
antimony	Työterveyslaitos, Sosiaali- ja terveysministeriö (Finland, 8/2007). Notes: calculated as Sb TWA: 0.5 mg/m ³ , (calculated as Sb) 8 hour(s).
United Kingdom (UK)	
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).
tin	EH40-OES (United Kingdom (UK), 2002). TWA: 2 mg/m ³ 8 hour(s). STEL: 4 mg/m ³ 15 minute(s).
antimony	EH40/2005 WELs (United Kingdom (UK), 8/2007). Notes: as Sb TWA: 0.5 mg/m ³ , (as Sb) 8 hour(s).
Austria	

8. Exposure controls/personal protection

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
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
antimony	GKV_MAK (Austria, 9/2007). STEL: 5 mg/m ³ , 1 times per shift, 30 minute(s). Form: inhalable fraction TWA: 0.5 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
antimony	SUVA (Switzerland, 1/2007). Notes: not temporary TWA: 0.5 mg/m ³ 8 hour(s). Form: inhalable dust
Belgium	
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
tin	Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). Absorbed through skin. TWA: 2 mg/m ³ 8 hour(s).
antimony	Lijst Grenswaarden / Valeurs Limites (Belgium, 6/2007). TWA: 0.5 mg/m ³ 8 hour(s).
Spain	
lead	INSHT (Spain, 1/2008). TWA: 0.15 mg/m ³ 8 hour(s).
tin	INSHT (Spain, 1/2008). TWA: 2 mg/m ³ 8 hour(s).
antimony	INSHT (Spain, 1/2008). TWA: 0.5 mg/m ³ 8 hour(s).
Turkey	
lead	EU OEL (Europe, 4/2006). Notes: Binding Limit value: 0.15 mg/m ³ 8 hour(s).
tin	NIOSH REL (United States, 6/2008). TWA: 2 mg/m ³ 10 hour(s).
antimony	NIOSH REL (United States, 6/2008). TWA: 0.5 mg/m ³ , (as Sb) 10 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).
antimony	178/2001 (Czech Republic, 12/2007). STEL: 1.5 mg/m ³ 15 minute(s). TWA: 0.5 mg/m ³ 8 hour(s).
Ireland	
lead	NAOSH (Ireland, 8/2007). OELV-8hr: 0.15 mg/m ³ 8 hour(s).
antimony	NAOSH (Ireland, 8/2007). OELV-8hr: 0.5 mg/m ³ 8 hour(s).
Italy	

8. Exposure controls/personal protection

lead	Ministero della Salute (Italy, 4/2008). TWA: 0.15 mg/m ³ 8 hour(s).
tin	ACGIH TLV (United States, 1/2008). TWA: 2 mg/m ³ 8 hour(s).
antimony	ACGIH TLV (United States, 1/2008). Notes: as Sb TWA: 0.5 mg/m ³ , (as Sb) 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
antimony	Sotsiaalminister (Estonia, 10/2007). TWA: 0.5 mg/m ³ 8 hour(s).
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
bismuth	Del Lietuvos Higienos Normos (Lithuania, 10/2007). TWA: 0.5 mg/m ³ 8 hour(s).
antimony	Del Lietuvos Higienos Normos (Lithuania, 10/2007). TWA: 0.5 mg/m ³ 8 hour(s).
Slovakia	
lead	Nariadenie vlády Slovenskej republiky (Slovakia, 6/2007). TWA: 0.15 mg/m ³ 8 hour(s).
antimony	Nariadenie vlády Slovenskej republiky (Slovakia, 6/2007). CEIL: 1 mg/m ³ Form: total dust TWA: 0.5 mg/m ³ 8 hour(s). Form: total dust
Hungary	
lead	EÜM-SzCsM (Hungary, 12/2007). Skin sensitiser. Notes: as Pb PEAK: 0.6 mg/m ³ , (as Pb) 15 minute(s). Form: Respirable TWA: 0.15 mg/m ³ , (as Pb) 8 hour(s). Form: Respirable EÜM-SzCsM (Hungary, 12/2007). Skin sensitiser. TWA: 0.05 mg/m ³ , (as Pb) 8 hour(s). Form: respirable dust PEAK: 0.2 mg/m ³ , (as Pb) 15 minute(s). Form: respirable dust
antimony	EÜM-SzCsM (Hungary, 12/2007). Skin sensitiser. Notes: as Sb PEAK: 2 mg/m ³ , (as Sb) 15 minute(s). TWA: 0.5 mg/m ³ , (as Sb) 8 hour(s).
Poland	
lead	Ministra Pracy i Polityki Społecznej (Poland, 9/2007). Notes: calculated as Pb TWA: 0.05 mg/m ³ , (calculated as Pb) 8 hour(s).
tin	Ministra Pracy i Polityki Społecznej (Poland, 9/2007). Notes: calculated as Sn TWA: 2 mg/m ³ , (calculated as Sn) 8 hour(s). Form: smokes and dusts
antimony	Ministra Pracy i Polityki Społecznej (Poland, 9/2007). Notes: calculated as Sb TWA: 0.5 mg/m ³ , (calculated as Sb) 8 hour(s).
Slovenia	
lead	Uradni list Republike Slovenije (Slovenia, 6/2007). TWA: 0.1 mg/m ³ 8 hour(s). Form: inhalable fraction
antimony	Uradni list Republike Slovenije (Slovenia, 6/2007). TWA: 0.5 mg/m ³ 8 hour(s). Form: inhalable fraction
Latvia	

8. Exposure controls/personal protection

lead	LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007). STEL: 0.01 mg/m ³ 15 minute(s). TWA: 0.005 mg/m ³ 8 hour(s).
bismuth	LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007). TWA: 0.5 mg/m ³ 8 hour(s).
antimony	LV Nat. Standardisation and Meterological Centre (Latvia, 5/2007). STEL: 0.5 mg/m ³ 15 minute(s). Form: dust TWA: 0.2 mg/m ³ 8 hour(s). Form: dust
Greece	
lead	PD 90/1999 (Greece, 8/2007). TWA: 0.15 mg/m ³ 8 hour(s).
tin	PD 90/1999 (Greece, 8/2007). TWA: 2 mg/m ³ 8 hour(s).
antimony	PD 90/1999 (Greece, 8/2007). TWA: 0.5 mg/m ³ 8 hour(s).
Portugal	
lead	Instituto Português da Qualidade (Portugal, 3/2007). TWA: 0.05 mg/m ³ 8 hour(s).
tin	Instituto Português da Qualidade (Portugal, 3/2007). TWA: 2 mg/m ³ 8 hour(s).
antimony	Instituto Português da Qualidade (Portugal, 3/2007). TWA: 0.5 mg/m ³ 8 hour(s).

Exposure controls

Occupational exposure controls	: No special ventilation requirements.
Hygiene measures	: Wash thoroughly after handling.
Respiratory protection	: Not applicable. Recommended: 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.
Hand protection	: Use strong, cut-resistant gloves suitable for handling metals. <1 hours (breakthrough time): disposable vinyl
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

9. Physical and chemical properties

General information

Appearance

Physical state	: Solid.
Colour	: Silvery.
Odour	: None.

Important health, safety and environmental information

Melting point	: 305°C (581°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

Skin 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, lungs, gastrointestinal tract, cardiovascular system, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

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	
antimony	France Occupational Exposure Limits	antimoine	Carc. C1, Carc. C2, Carc. C3	

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

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-	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
-	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	96 hours

12. Ecological information

	-	Acute LC50 5100 ug/L Fresh water	dolomieui - Fingerling 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
	-	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 dolomieui - Swim-up	96 hours
	-	Acute LC50 2200 ug/L Fresh water	Fish - Smallmouth bass - Micropterus dolomieui - 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
antimony	-	Acute LC50 6.2 to 8.3 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling) - 8 to 15 mm	96 hours
	-	Chronic NOEC 6.2 ppm Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling) - 8 to 15 mm	96 hours

Biodegradability

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

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12. Ecological information

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.

European waste catalogue (EWC) : 06 04 05* wastes containing other heavy metals

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
antimony
RG 1
RG 73

Germany

Hazard class for water : nwg Appendix No. 4

Technical instruction on air quality control : TA-Luft Class II - Number 5.2.2: 70.1%
TA-Luft Number 5.2.1: 28.5%
TA-Luft Class III - Number 5.2.2: 1.4%

Italy

Emission control directive : Not classified.

16. Other information

Full text of R-phrases referred to in sections 2 and 3 - Europe : R25- Toxic if swallowed.

Full text of classifications referred to in sections 2 and 3 - Europe : T - Toxic

History

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Version : 3
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.