

Health and Safety Data Sheet

1. Identification of Substance/Preparation and of the Supplier

Description : CEL lead free extruded solder bar.

Part No./Code :

CEL Part No.	Anglia Order Code	Alloy
45C501A	680105	Tin/Copper (Sn/Cu)
45C102C	680107	Tin/Copper (Sn/Cu)
45D501A	680106	Tin/Silver/Copper (Sn/Ag/Cu)
45D102C	680108	Tin/Silver/Copper (Sn/Ag/Cu)
45E501A	680109	Tin/Silver/Copper (Sn/Ag/Cu)
45E102C	680110	Tin/Silver/Copper (Sn/Ag/Cu)

Supplier : Anglia (refer to sheet 4 for contact details).

2. Composition / Information on Ingredients

Note: Solder bar is considered to be an article and is not subject to the Classification (Hazard Information and Packaging for Supply) Regulations 1994, because it is not hazardous as supplied. However, this product may become hazardous in use and the information in this data sheet reflects the hazards associated with solder reflow operations.

Chemical Breakdown :

CEL Part No.	Alloy	Composition (typical values)
45C501A 45C102C	Sn/Cu	Tin 99% / Copper 1%
45D501A 45D102C	Sn/Ag/Cu	Tin 95.2% / Silver 3.8% / Copper 1%
45E501A 45E102C	Sn/Ag/Cu	Tin 99% / Silver 0.3% / Copper 0.7%

3. Hazards Identification

Inhalation of fumes from any flux used with the products will irritate the nose, throat and respiratory system.

4. First Aid Measures

Inhalation : Providing soldering temperatures are kept below 500°C these products will not give off harmful fumes. Any flux used with the products may generate irritating or harmful fumes. The Health and Safety Data Sheet for the flux should be read to ascertain health hazards and appropriate first aid measures.

Ingestion : Not relevant.

Skin Contact : Wash hands with soap and warm water after handling the solder alloys. If irritation develops, seek medical advice.

Eye Contact : Fluxes used with these products may generate fumes which may irritate the eyes. Fluxes may spit during soldering. Flush immediately with plenty of water. In cases where spitting flux has entered the eye seek medical attention.

5. *Fire Fighting Measures*

Extinguishers : Suitable - dry chemical, carbon dioxide, water spray or foam.
Unsuitable - water jet.

Temperatures above 500°C may produce heavy metal dust, fumes and/or vapours. Fire fighters should wear full protective clothing and positive pressure breathing apparatus.

6. *Accidental Release Measures*

Not applicable.

7. *Handling and Storage*

Handling:

Avoid inhaling the fumes emitted by the fluxes used with these products. Ensure that the general area is well ventilated. Wash hands with soap and water after handling solder, particularly before eating, drinking or smoking.

Storage:

The products should be stored in a cool, dry area. Keep out of reach of children and away from food and drink.

8. *Exposure Controls / Personal Protection*

Extraction should be provided to control exposure to fumes from any flux used.

Occupational Exposure Limits : None assigned

Ref : EH40 Occupational Exposure Limits

Respiratory Protection : Necessary if there is a risk of exposure to flux fumes.

Eye Protection : Operators should wear safety glasses or goggles to protect the eyes from spitting flux.

9. *Physical and Chemical Properties*

Appearance : Solid alloy bar, silver-white to grey in colour.

Odour : Not perceptible at ambient temperatures.

Melting Range : 217°C to 227°C

Solubility in Water : Insoluble.

10. *Stability and Reactivity*

Conditions to avoid :

If solder is exposed to temperatures above 500°C then metal dust, fumes and/or vapour may be produced.

Materials to avoid :

Solder will react with concentrated nitric acid to release toxic fumes of nitric oxide, which oxidises to nitrogen dioxide, a red gas with a pungent odour. If personnel are exposed to these gases then immediate medical attention should be sought, as symptoms can be delayed for a considerable time and can be fatal.

11. Toxicological Information

Acute :

Any flux fumes produced during soldering will irritate the nose, throat and respiratory system. Skin exposed to flux fumes may be affected by irritation and rash.

Chronic :

No chronic health effects have been observed for these products.

12. Ecological Information

None available

13. Disposal Considerations

Wherever possible unwanted solder should be recycled for recovery of metal. Otherwise disposal should be in accordance with local and national legislation. In the UK this is the Control of Pollution Act 1974, the Environmental Protection Act 1990 and regulations made under them.

14. Transport Information

Solder bar is not classified as hazardous for transport.

15. Regulatory Information

Classification according to the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994:

Solder bar is considered to be an article and is not subject to the above regulations. However, it is recommended that the following information be included on labels:

After handling solder wash hands with soap and water before eating, drinking and smoking. Keep out of reach of children.

Applicable EC Directive :

Directive 80/1107/EEC on the protection of workers from the risk related to exposure to physical, chemical and biological agents at work.

Applicable UK Legislation :

The Health and Safety at Work etc. Act 1974

The Control of Substances Hazardous to Health Regulations 1999

The information provided in this Health & Safety Data Sheet is accurate to the best of our knowledge and belief. As we cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, are used this Data Sheet cannot constitute the user's assessment of workplace risk. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes.

16. Other Information

Further Detailed Guidance from the UK Health and Safety Executive :

HS(G) 37	An Introduction to Local Exhaust Ventilation
HS(G) 53	Respiratory Protective Equipment - a Practical Guide for Users
HS(G) 97	A Step by Step Guide to the COSHH Regulations
L55	Preventing Asthma at Work: How to control Respiratory Sensitisers
L73	A Guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995
MS24	Health Surveillance of Occupational Skin Diseases
MS25	Medical Aspects of Occupational Asthma

Approved Code of Practice - Management of Health and Safety at Work
General Approved Code of Practice to the COSHH Regulations
Health Surveillance Under COSHH: Guidance for Employers

EH26	Occupational Skin Diseases: Health and Safety Precautions
EH40	Occupational Exposure Limits (revised annually)
IND(G)95L	Respiratory Sensitisers: A guide for Employers
IND(G)172L	Breathe Freely - A worker's Information Card on Respiratory Sensitisers
IND(G)248L	Solder fume and you
IND(G)249L	Controlling health risks from rosin (colophony) based solder fluxes

Engineering Sheet No 17 Assessing exposure to rosin (colophony) based solder flux fume

MDHS 83	Methods for the Determination of Hazardous Substances Resin acids in rosin (colophony) solder flux fume
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This Health and Safety Data Sheet is based on the requirements of the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994, (Commission Directive 91/155/EEC, as amended by Directive 93/112/EEC). It was issued on June 6th 2005.

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