GROSVENOR ELECTRONICS SUPPLIES UK
MATERIAL SAFETY DATA SHEET

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING

PRODUCT NAME: Grosvenor Lead-Free Solder Alloys

Alloys Covered: 95A, 96S, Sn96, 96SC, 97Cu3, 99BG, 99C and Pure Tin.

SUPPLIED BY: Grosvenor Electronics Supplies (UK) Tel: 01482 627327
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2 COMPOSITION/INFORMATION ON INGREDIENTS

Note: Solder wire and 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, the product may become hazardous in use and the information included in this data sheet reflects the hazards associated with solder re-flow operations.

Alloy	Liquidus	Solidus	Density
95A	243	236	7.2
96S, Sn96	221	221	7.5
96SC	221	221	7.5
97Cu3	250	230	7.4
99BG	240	230	7.3
99C	240	227	7.3
Tin	232	232	7.3

3 HAZARDS IDENTIFICATION

Inhalation of the fumes given off by the fluxes used with these alloys may irritate the nose, throat and respiratory system. Refer to the suppliers safety data sheet for the specific flux used.

4 FIRST AID MEASURES

Inhalation Fumes given off by fluxes used with these alloys may irritate the nose and throat Remove patient to fresh air. Obtain medical attention if there is any respiratory distress.

Ingestion Not relevant.

Skin Contact Not likely to have a harmful effect on the skin. Wash hands with soap and water after handling solder. If any skin irritation develops seek medical attention.

Eye Contact Flux fumes may irritate the eyes. The flux 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.
	Un-suitable :	water jet

6 ACCIDENTAL RELEASE MEASURES

Not applicable

7 HANDLING AND STORAGE

The flux fumes produced during soldering should be extracted away from the breathing zone of the operators. Avoid inhaling flux fumes. Ensure that the general area is well ventilated. Wash hands with soap and water after handling solder, particularly before eating, drinking or smoking. This product should be stored in a cool, dry area. Keep out of the reach of children and away from food and drink.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Extraction should be provided to control exposure to flux fumes. Suitable examples include bench top, soldering iron tip extraction or an extraction arm.

Occupational Exposure Limits

None assigned

Respiratory Protection:

Necessary if there is a risk of exposure to high concentrations of flux fumes.

Eye Protection

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

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Silver-white to grey alloy wire
Odour	Odourless at ambient temperatures
Solubility in water.	Insoluble

10 STABILITY AND REACTIVITY

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.

Under reducing conditions alloy 95A may generate the toxic gas stibine (antimony trihydride)

11 TOXICOLOGICAL INFORMATION

Acute Toxicity

The fumes from the fluxes used with these alloys may irritate the nose, throat and respiratory system.

Chronic Toxicity

There are no known chronic effects associated with the use of lead-free solder alloys.

12 ECOLOGICAL INFORMATION

These products have little adverse effect on aquatic or terrestrial life.

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 alloy is not classified as hazardous for transport.

15 REGULATORY INFORMATION

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

Solder alloy is considered to be an article and is not subject to the above regulations.

Applicable EC Directives

Dangerous Substances Directive 67/548/EEC as amended by Directive 92/32/EEC
Dangerous Preparations Directive 88/379/EEC as amended by Directive 90/492/EEC
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 Act 1974
The Control of Substances Hazardous to Health Regulations 1999
The Management of Health and Safety at Work Regulations 1992

16 OTHER INFORMATION

Recommended Uses

This safety data sheet covers a range of lead-free solder alloy. Reference should be made to the Grosvenor Technical Sales Team for further 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

General Approved Code of Practice to the COSHH Regulations
Approved Code of Practice – Management of Health and Safety at Work

EH40 Occupational Exposure Limits (revised annually)

This Safety Data Sheet is based on the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994, (Commission Directive 91/155/EEC, as amended by Directive 93/112/EEC).

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