

## GROSVENOR ELECTRONICS SUPPLIES U.K.

### TECHNICAL DATA SHEET

**Product Name :-** PureFlow- F Solder (High Purity Solder Bar)

**Supplier Details :- :-** Grosvenor Electronics Supplies U.K.  
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### INFORMATION

- High Purity alloy for high performance soldering
- Improved yields, especially on densely populated boards
- Special alloy composition improves flow and reduces oxide formation for more consistent results.
- Bright solder joints
- Low impurity levels increase life of alloy in the solder bath and reduce bath maintenance.

### APPLICATIONS

**PureFlow-F** solder evolved from a series of investigations aimed at discovering the basic facts governing the formation of dross on molten solder. **PureFlow –F** solder alloy is specially formulated to improve solder flow and reduce oxide formation on the solder surface during operation of a solder bath.

The demands of modern electronics design have led to more densely populated PCB's with a resultant rise in defect rates during soldering processes. **Pureflow-F** is designed to meet these stringent requirements by increasing flow rates and fluidity of the solder in the bath to improve both wetting and drainage during soldering, thereby reducing the incidence of defects.

Solder oxides will form more rapidly on a constantly moving surface such as that encountered in a solder wave. The use of turbulent waves to improve solder access to miniature chip components only serves to compound this problem. In all such applications the use of **PureFlow-F** solder is to the benefit of both the economics of the operation and to the quality of the soldered boards.

Apart from reducing waste, **PureFlow-F** is more efficient because the quantity of solder deposited on the boards is reduced, resulting in neater joints and decreasing the possibility of icicling and bridging. Inspection and rework time is therefore reduced to a minimum.

### **RECOMMENDED OPERATING CONDITIONS**

**PureFlow-F** solder is a 63% tin-based alloy suitable for use in dynamic and turbulent solder wave systems.

The optimum temperature range for operation of the solder bath is 250°C +/- 10°C.

Oxide formation occurs at a remarkably low rate using **PureFlow-F** solder in place of conventional solder alloys, but any amount of dross which does form on the surface of the solder bath will be noticeably drier in texture than usual and can be easily removed by skimming on a regular basis.

To ensure the continued optimum performance of **PureFlow-F** solder in your manufacturing process it is important that a periodic analysis of the solder bath contents is undertaken to verify that the alloy composition is maintained within strict limits. Any build –up of undesirable impurity elements or a reduction in the tin content may lead to poor flow characteristics and non-ideal solder joint structures, with a subsequent rise in defect rates. Grosvenor Electronics Supplies U.K. will be pleased to discuss with you details of our solder bath analysis programme.

### **TECHNICAL SPECIFICATIONS**

Property	Value
Solidus	183°C
Liquidus	183°C
Density	8 . 4gm <sup>3</sup>
Electrical Conductivity	11 . 9% IACS
Ultimate Tensile Strength	67N mm <sup>2</sup>
EN29453 Classification	S-Sn63 Pb37

## **MANUFACTURING CONTROL**

All **PureFlow-F** bar solders are made with tested, traceable batches of alloys. Our manufacturers keep samples of every batch of solder for a minimum three year period.

Their traceability system conforms to the demands of BS EN ISO 9001

## **AVAILABILITY**

STYLE	NOM. WEIGHT	DIMENSIONS	PACKING
Bar	1 kg	300 x 32 x 12mm	25kg Carton
Autofeed Ingot	2kg	320 x 42 x 20mm	24kg Carton
Autofeed Ingot	5kg	500 x 45 x 33 mm	5kg
Chunks	-	-	15kg Carton

**PureFlow-F** is available in a variety of grades including Sn60 Pb40 Sn60 Ag2 Pb36. Please contact sales at Grosvenor with any specific alloy requirement.

## **HEALTH AND SAFETY**

**Warning :** The following information is for guidance only and users must refer to the Material Safety Data Sheets relevant to **PureFlow-F** solder products before use.

**Protection and Hygiene :** Eating, drinking and smoking should not be permitted in the working area. Hands should be washed with soap and warm water after handling solder, especially before eating.

Whilst every endeavour has been made to ensure that the information given on this Technical Data Sheet is correct Grosvenor Electronics Supplies U.K. give no warranty, expressly or implied relating to the use or performance of the product.

Issued January 2005 Issue 2