S/M-407-2

HiFLO®
High Fluidity Bar Solder

GENERAL DESCRIPTION

HiFlo solder is manufactured with virgin metals process through Alpha's proprietary viscosity and dross lowering treatments which create the purest, lowest drossing, highest fluidity solder. HiFlo is then alloyed and cast in a closed-loop injection system under a nitrogen blanket which leaves it free of cast-in impurities and included oxides. This enhances its low drossing characteristics.

USES

HiFlo is the ideal companion product for all wave soldering systems including inert atmosphere equipment. When used to solder Surface Mount Technology (SMT), fine pitch, or densely populated boards, the lowest defect rates and highest number of solder joints per pound possible are achieved. HiFlo's high purity and fluidity reduces rework by minimizing bridging, icicling and other causes of defective joints and can be used at a lower operating temperature.

FEATURES & BENEFITS

- Increases production speed.
- Reduces production cost
- Minimizes drossing.
- Reduces bridging
- Reduces icicling
- Solders densely populated boards.
- Solders at lower temperature.
- Increases yield.

TECHNICAL SPECIFICATIONS

The following indicates the Alloy and Impurity Specification limits for HiFlo Solder in relation to J-STD 006 and ASTM B-32-89. The values are maximum limits unless otherwise indicated.

ELEMENT	J-STD-006	ASTM B-32-89	HiFLO
Sn	62.5-63.5	62.5-63.5	63.0 Normal
Pb	Balance	Balance	Balance
Sb	0.50 max	0.5	**
Cu	0.08 max	0.08	.001
Au	0.05 max	N/A	.001
Ag	0.10 max	0.015	.001
Al	0.005 max	0.005	.001
As	0.03 max	0.03	.001
Bi	0.10 max	0.25	.005
Cd	0.002 max	0.001	.001
In	0.10 max	N/A	.001
Fe	0.02 max	0.02	.001
Ni	0.01 max	N/A	.001
Zn	0.003 max	0.005	.001
S	N/A	0.0050	.001
P	N/A	0.010	.001
Oxides	N/A	N/A	***

** QQS-571/ASTM B-32-89 or customer specification
*** passes Alpha Dross Inclusion Test

AVAILABILITY

HiFlo is provided as Sn63 in a 1.75lb. bar that is readily identified by its special shape and markings, in 50 lb. cartons. This allows easy material segregation and identification.

Cookson Electronics ASSEMBLY MATERIALS

HiFLO® BAR SOLDER

- Selective control of raw materials.
- Proprietary control of trace elements to inhibit the formation of dross.
- Nitrogen inerted molten casting process.
- Unique process for pot monitoring and analysis.
- Proprietary pot treatments for control of oxides and viscosity.

BENEFITS OF HiFLO - ALPHA'S CONTROLLED VISCOSITY SOLDER

- Decreases wetting force required to wet out pads and thru-holes.
- Better peel off at wave exit.
- Decreased bridging in fine pitch technology.
- Compensates for board design that causes shadowing and reduces solder skips.
- Smaller fillets yield more joints per pound.
- True parabolic shaped fillets.
- Lowers dross generation.
- Extends pot life by allowing lower operating temperature.
- Easier inspection and less rework/touch-up due to brighter solder joints.
- Decreases solder defects.
- Significantly improves throughput.
- Reduces surface tension in nitrogen blanket soldering equipment.