TECHNICAL BULLETIN

SM-650

Alpha Pb-Free Solder

Safe-Flo® Alloy Sn 99% Cu 1%

GENERAL DESCRIPTION

Sn 99 Cu 1 is a Pb-Free alloy suitable for use as a replacement for Sn63 alloy in static bath soldering and surface mount applications for electromechanical assemblers interested in instituting a Pb-free process. As with all Alpha Metals Bar Solder, Alpha's proprietary Vaculoy alloying process is used to remove certain impurities, particularly oxides.

FEATURES AND BENEFITS

The proprietary Vaculoy process is a highly effective method for removing included oxides from solder. This is extremely important because included oxides generate excessive drossing and increase the viscosity of the solder. Solder with higher viscosity can result in increased soldering defects (i.e. solder bridging).

AVAILABILITY

Sn 99 Cu 1 is available in:

- 2.2lb (1 kg) solder bars
- solid wire mm. 3
- Other forms, for example, wire solders are available on request.

TECHNICAL SPECIFICATIONS

Composition

Element	Specification
Sn	Balance
Ag	0,05
Cu	0,45 ± 0,90
Bi	0,10
Pb	0,10
Sb	0,05
Au	.05 max
Al	.001 max
As	.03 max
Cd	.002 max
In	0.05 max
Fe	.02 max
Ni	.01 max
Zn	.001 max

Material Characteristics*

Characterisic	Data
Melting Point	230 – 240 °C
Specific Gravity	7.41 g/cc
TCE (Range 30-210°C)	23 micrometers / meter °C

* Data was developed using laboratory samples.

HEALTH & SAFETY

See MSDS for proper handling and safety instruction.

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