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LEAD FREE LFS/WS217 WATER SOLUBLE PASTE **SAC 387 (Sn95.5/Ag3.8/Cu0.7)**

Description

LFS/WS217 has been formulated to give manufacturers a wide process window with excellent printing and wetting properties.

LFS/WS217 gives bright, smooth and shiny solder joints with residues which are easily removed in warm tap water (40-65°C) up to two weeks after reflow pending environment.

Benefits

- RoHS Compliant
- Superior wetting and spreading characteristics
- Reduces or eliminates voiding, particularly under BGA's
- Broad print process window
- High resistance to solder balling
- Long stencil life and tack time
- Easily cleaned residues
- Low Foaming

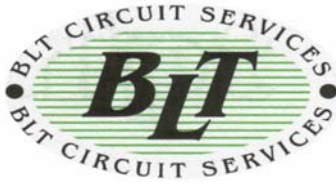
Application

Allow the solder paste to warm up to room temperature (at least 8 hours) before using for the first time. Stir with a spatula for at least 30 seconds to ensure homogenisation of paste. Apply sufficient paste to the stencil to allow a smooth even roll. A bead diameter of ½ to 5/8 inch is normally sufficient. Squeegees should be set at 60° for highest print definition. Pressure should be around about 0.28-0.33kg/sq cm, print speed 20-150mm/sec with 0.0mm snap-off distance (on contact).

Do not store new and used paste in the same container. Once a pot of paste has been opened, replace the internal plug, re-seal and store in a cool place out of direct sunlight. Do not return to fridge. Paste that has not been opened may be kept in the fridge (4°C) for up to 6 months.

Reflow

The LFS/WS217 paste can be reflowed using any of the two most commonly used profile types i.e. RTS (Ramp-To-Spike), and the low voiding profile. Please refer to the Reflow Profile Supplement.



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Cleaning

LFS/WS217 is easily cleaned in normal tap water between 40-65°C, and will suit immersion or spray, batch or in-line cleaning. De-ionised water is recommended for the final rinse.

Surface Insulation Resistance Testing

The Surface Insulation resistance Test (SIR) for solder paste was carried out according to J-STD-004 and IPC-TM-650 method 2.6.3.3.

Results

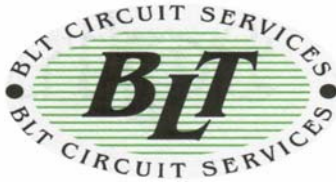
<u>Reference</u>	<u>Property</u>	<u>Pass-Fail Criteria</u>	<u>Result</u>
IPC-TM-650 5.5.1	Quality of control coupons	>1E9 Ω at 96 and 168h	PASS
J-STD-004 3.2.4.5.1	SIR of test coupons	>1E8 Ω at 96 and 168h	PASS
IPC-TM-650 5.5.2	Post-test visual inspection	No dendritic growth Or corrosion	PASS

Conclusions

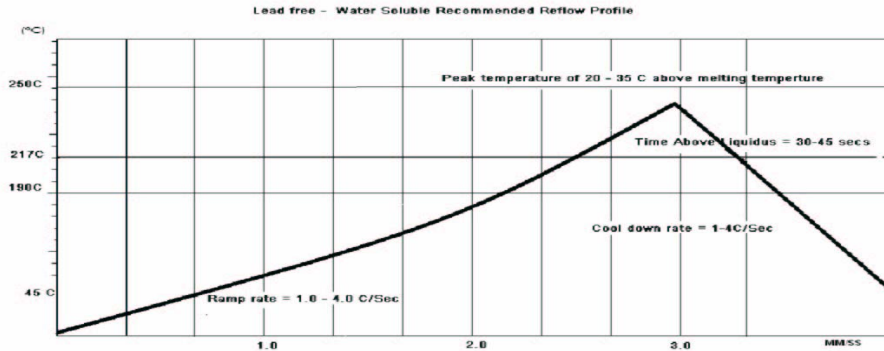
The results of the qualification tests indicate that the LFS/WS217 solder paste complies with the requirements of IPC TM-650 Method 2.6.3.3 for Surface Insulation Resistance (SIR) with two weeks between reflow and cleaning.

WARRANTY

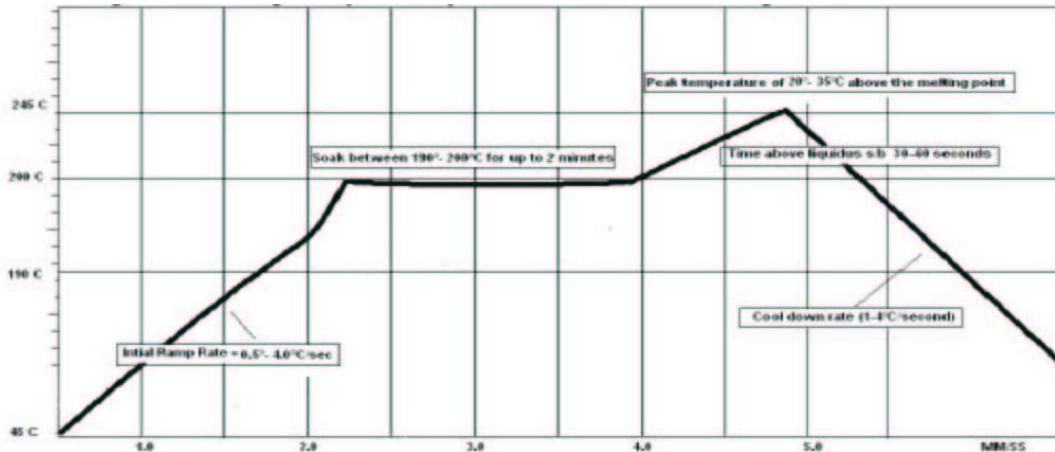
All reasonable endeavours have been made to ensure that the information contained in this data sheet is accurate, but it is submitted on the express condition that BLT Circuit Services Ltd shall not be under any liability of whatsoever nature, arising, suffered or incurred as a consequence of its use.



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Low-Voiding Profile: Designed specifically to eliminate/reduce voiding with BGA and CSP devices.



Profile Guidelines

- The initial rate of rise is 0.5 to 4°C/second.
- Ramp up to 190°C and then soak the assembly between 190 to 200°C for up to 120 seconds.
- Proceed to spike immediately after exiting the soak zone.
- Peak temperature is 238 to 253°C.
- Time above liquidus is 30 to 60 seconds.
- The total profile length should be between 4½ - 5 minutes from ambient to peak temperature.
- Cool down should be controlled within 4°C/second.