DSP 818
Solder Paste, Low Residue No-Clean

DESCRIPTION
818 No-clean is a low residue solder paste designed for surface mount and other electronic assembly applications. The unique properties of this formula provide excellent activity, long stencil life, long tack time, high print speed, and a longer shelf life. Post soldering residues are transparent, non-corrosive, non-conductive.

BENEFITS
- Bellcore compliant
- 24 hour stencil life
- Excellent wetting on OSP
- 48 hour tack time
- Prints up to 8 in per sec.
- Low residue
- Air or nitrogen reflow

APPLICATION

STENCIL PRINTING/PARTICLE SIZE
≥ 50 mil pitch: Use -200+325 mesh
≥ 16 mil pitch: Use -325+500 mesh
≤ 16 mil pitch: Use -400+635 mesh

ALLOYS
Sn63/Pb37, Sn62/Pb36/Ag2, etc. (Meets J-STD-006 Specification)

METAL CONTENT
Stencil Printing: 90%
Screen Printing: 88%

REFLOW PROFILE
The melting temperature of the solder and the heat resistance of components determine reflow Profile. 818 can be processed in most reflow media, (i.e. IR, Vapor-phase, Forced convection, etc.). Ramp rate of 2.5-3.0°C per second is desirable, since most components are rated for 4.0°C per second.

PHYSICAL / CHEMICAL CHARACTERISTICS

Color and Appearance
Metallic Gray

Copper Mirror Test
Pass/No breakthrough

J-STD Classification
ROL0

Silver Chromate (Chloride & Bromide Test)
Pass/No discoloration

Surface Insulation Resistance
Bellcore4 4.12 x 10^12 ohms (4 days, 35°C, 85% R.H.)
J-STD-004 9.8 x 10^12 ohms (7 days, 85°C, 85% R.H.)

pH-5% Aqueous Solution (Flux Extract)
3.0 - 5.0

Softening Point
125°C (257°F)

Electromigration, Bellcore4 Pass

Viscosity
Malcom1 140-200 kcps, 90% metal, (-325+500 mesh)
Brookfield2 900 kcps +/- 10%, 90% metal, (-325+500 mesh)

Tack3
Time 48 Hours (22°C, 45% R.H.)
Initial tack force 100.2 grams
Tack retention after 24 hours 95.6 grams

SHIPPING & STORAGE
Recommended Storage Temperature
35°C-50°F

SHELF LIFE
Unopened Container
35°C-65°F 6 Months (from DOM)

1. Malcom PCU-Series, 10 RPM, 25°C
2. Brookfield RVTD, TF spindle, 5 RPM, 25°C, 0.75” spindle depth
3. Per IPC-TM-650 2.4.44
4. Bellcore GR-78-CORE

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Rev: 12-31-07 818
Consult MSDS for health and safety information
818 PROFILE

TEMP.: IN°C

ALLOY: SN62 or SN63

PREHEAT 125-145°C
Min: 60 sec.
Max: 120 sec.

PEAK TEMPERATURE
Min: 205°C
Max: 220°C

REFLOW
Min: 60 Sec.
Max: 90 Sec.