STIRRI-V3™

STIRRI®

No-clean Solder Paste & Tacky Paste Flux

MPN: SV3 | OEM: V3
Class: ROL0

Keynotes

- Rosin-based low-activity ROL0 (No-clean)
- Next generation assembly - improved formulation
- Low voiding. Optimal viscosity. Fully translucent residue. REACH-complaint.
- Quick evaporation under Hot Air reduces cleaning
- Mighty action, smooth flow, excellent ability to hold components in place.
- Pleasant non-chemical sweet scent.
- Sharp definition at high-speeds. Low solder balling and graping. Long stencil life
- Easy to clean using IPA, solvents, water-based saponifiers, vapor degreaser or ultrasonic devices

Alloys

STIRRI-V3™ - available in many alloys: Sn42Bi58, Sn42Bi57.6Ag0.4, Sn42Bi57Ag1, Sn43Pb43Bi14, Sn60Pb40, Sn62Pb36Ag2, Sn62.8Pb36.8Ag0.4, Sn63Pb37, Sn96.5Ag3.5, Sn96.5Ag3.0Cu0.5, Sn99Ag0.3Cu0.7, Sn99.3Cu0.7, Sn100c

Viscosity / Tackiness

PRINT jar/cartridge	DISPENSE syringe	Tacky flux	Tack force
170-230	80-110	38-51	35-45

* Malcom @ 10 RPM @ 25°C x10^3 g/cm/s — g/cm

Stencil Life

Test @ 30-70% R/H & 20-25°C: < 12 hours

Printer Operations

Stencil printer does not require any specific optimization, should be fully adjustable based on standard in-house process requirements, including high-speed printers

Print Speed: 20-200 mm/sec (add pressure for speed)

Squeegee Pressure: 70-540 g/cm of blade (add for speed)

Stencil Vac/Wipe: Every 10-25 prints or as necessary

Automated and vacuum cleaning systems for both stencil and misprinted boards. Manual cleaning using Isopropyl alcohol (IPA), co-solvents and/or ultrasonic scrubbers, vapor degreaser.

Made with QCAid™

Glows in UV/blacklight allowing for instant visual contamination inspection. QC-Aid: Everyone can QC!™

J-STD-004C Test Results / IPC-TM-650

IPC-TM-650	Test	Value	Result
Corrosion	2.6.15	L: No corrosion	PASS
Copper Mirror	2.3.32	L: No breakthrough	PASS
ECM (No-clean)	2.6.14.1	<1 decade drop	PASS
Quantitive Halides	2.3.28.1	L: <0.05%	PASS
SIR Test (No-clean)	2.6.3.7	≥100 MΩ	PASS

Packaging

Options with various viscosity and metal load for stencil printing and dispensing applications:

Printing: Jars, 1/4 NPT nozzle cartridges

Dispensing: Syringes, ProFlow cassettes

Printing

Optimal print definition for fine pitch applications. Long stencil life of this product virtually eliminates waste of solder paste. For mesh/size determination refer to the Pitch Requirements chart below:

Pitch Requirements

Size (micron)	Type	Value
75 - 45 µm	T2	24 mil +
45 - 25 µm	T3	16 - 24 mil
38 - 20 µm	T4	12 - 16 mil
25 - 15 µm	T5	< 12 mil
20 - 5 µm	T6	< 8 mil

Shelf life, Storage, Handling

Refrigerated storage at 5-7°C will prolong the solder paste shelf life to no less than 6 months. Solder Paste should be allowed to reach ambient temperature, normalize for about 6-8 hours before use. Tacky flux has 24 months shelf life stored in room temperature. Refrigeration won't extend shelf life. Normalize for 4-6 hours if stored refrigerated. Paste/flux in syringes and cartridges should be kept vertically, dispensing tip pointing down.

NEVER FREEZE SOLDER PASTE / FLUX!

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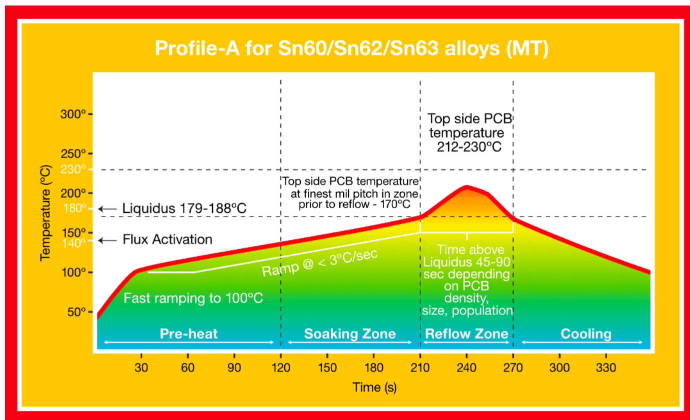
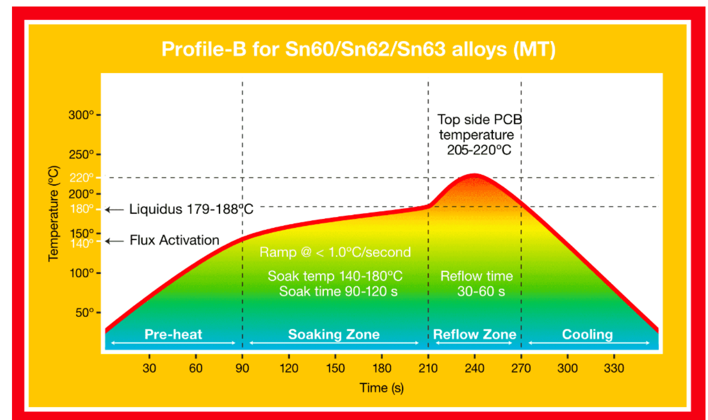
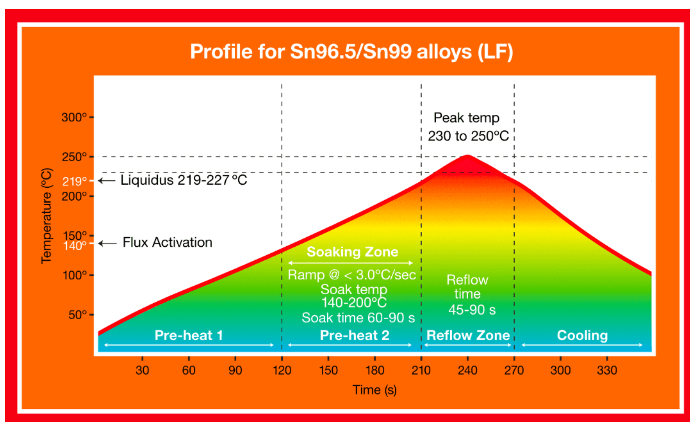
Sample Reflow Profile



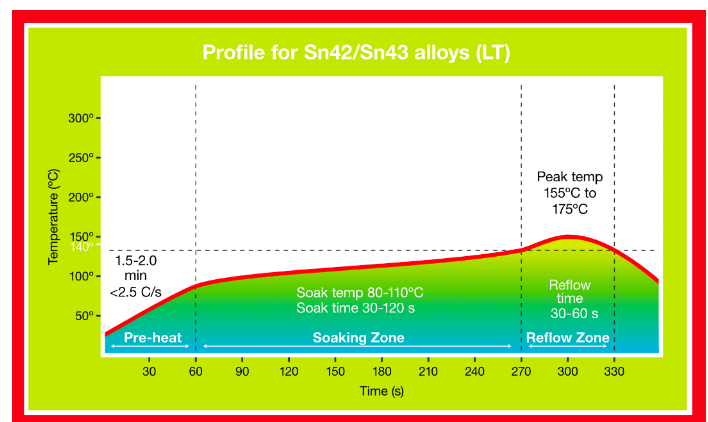
Mt° Profile-A can be used as a starting point for the leaded process optimization with Sn60, Sn62, Sn63 alloys. A cooldown rate of 2-4°C/sec is ideal for the formation of fine grain structure without risking damage to thermally sensitive components.



Mt° Profile-B is an alternative approach to solder Sn60, Sn62, Sn63 utilizing a soak of up to two minutes at 155°C may help to minimize voiding in leaded BGA, LGA & QFN assembles. This will allow more time for solvent components of the solder paste to outgas prior to reflow.



LF Profile as a starting point for lead-free process optimization using SAC305/SAC307 alloys.
A cool down rate of 2-4°C/sec is ideal for the formation of fine grain structure without risking damage to thermally sensitive components.



Lt° Profile as a starting point for low-temperature process optimization using Sn/Bi alloys. To achieve better results with voiding or reduce tombstoning, consider using a longer soaking zone.

Nano-Coating ensures end-customer satisfaction while virtually eliminating assembly claims due to environmental or consumer liquid damages