AMTECH
Advanced SMT Solder Products

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An ISO 9001 Certified Company

Product Data Sheet

SynTECH No-Clean Solder Paste

Product Description

>Synthetic materials
>Long stencil life
>Wide reflow window
>Excellent wetting compatibility
>Low voiding
>Compatible with enclosed printing heads

Alloys

AMTECH manufactures a low-oxide, spherical and uniformly sized powder. 63Sn/37Pb, 62Sn/36Pb/2Ag, 60Sn/Pb40, 43Sn/43Pb/14Bi and 42Sn/58Bi.

Powder Distribution

Micron Size	Type
75 - 45	Type-2
45 - 25	Type-3
38 - 25	Type-4
32 - 20	Type-5
<20	Type-6

Available Packaging

Standard packaging for stencil printing and dispensing applications.
250 and 500g jars
250 and 700g cartridges
750g ProFlow^{R} cassettes
35 and 100g syringes

Viscosity

Printing applications - 800 to 900Kcps +/- 10%
Dispensing applications - 400 to 500Kcps +/- 10%
Tested according to IPC-TM-650

Stencil Life

>10 hrs. @ 20-50% RH & 22-28°C
~6 hrs. @ 50-70% RH & 22-28°C

Tack Value

Typical Tackiness - 44g force

Printing

The print definition of SynTECH is ideal for fine pitch applications. The stencil life of this no-clean product virtually eliminates waste of solder paste.

Printer Operation

The following are general guide lines for stencil printer optimization for SynTECH. Some adjustments maybe necessary based on your process requirements.

Print speed: 25-100mm/sec
Squeegee Pressure: 0.2-0.7kg/inch of blade
Under Stencil Wipe: Once every 10-25 prints or as necessary.

Stencil Cleaning

Automated stencil cleaning systems for both stencil and misprinted boards. Manual cleaning using (IPA) isopropyl alcohol, works well.

Storage and Handling Procedures

Refrigerated storage of 42 - 47°F will prolong the solder paste shelf life, to no less than 1 year.
Syringes & cartridges should be stored vertically with the dispensing tip down.
Solder paste should be allowed to reach ambient temperature naturally, prior to use. (about 6 - 8 hours)

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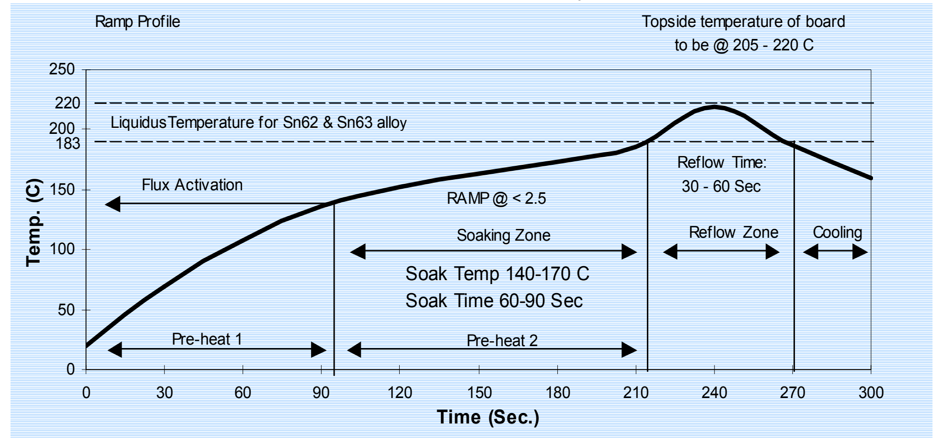
J-STD-004 (IPC-TM-650) TEST RESULTS

Test	Standard	Values	Results
Flux Designator	IPC-TM-650 2.3.35	NA	REL0
Copper Mirror	IPC-TM-650 2.3.32	NA	PASS
Silver Chromate	IPC-TM-650 2.3.33	NA	PASS
Bono Mirror Test	NA	3.60%	PASS
SIR Test	IPC-TM-650 2.6.3.3	4.28E+10	PASS

Recommended Profiles:

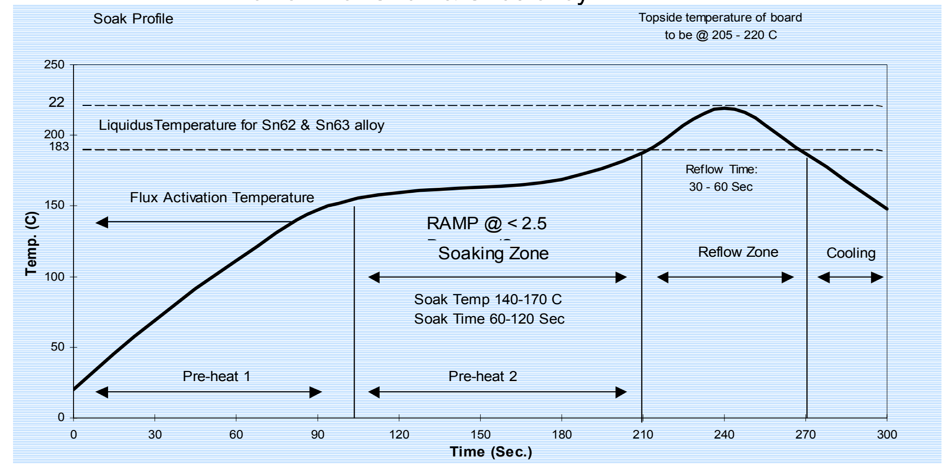
Profile-A was designed to serve as a starting point for process optimization using the SynTECH. A cool down rate of (-) 2 - 4°C/second is ideal for the formation of a fine grain structure without risking damage to thermally sensitive components.

Profile-A for Sn62 & Sn63 alloy



When seeking to minimize voiding in BGA assembles, a profile utilizing a soak of up to 2 minutes at 155°C may help. This will allow more time for the solder paste to outgas prior to reflow.

Profile-B for Sn62 & Sn63 alloy



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