

AMTECH

Advanced SMT Solder Products

SMT International, LLC
P.O. Box 989
Deep River, CT 06417
Toll free: 800.435.0317
Phone: 860.526.8300
Fax: 860.526.8243
www.amtechsolder.com

An ISO 9001 Certified Company

Product Data Sheet

NC-559-AS Halogen Free No-Clean Solder Paste

Product Description

- Powder is spherical and uniform in size
- Solder paste is halogen free
- Yields a clean, bright, and shiny surface
- Excellent wetting characteristics
- Solder paste is non-toxic
- Solder paste is non-flammable
- Solder paste is non-corrosive

Alloys

AMTECH manufactures a low-oxide, spherical and uniformly sized powder. NC-559-AS is available in the following alloys: 63Sn/37Pb, 62Sn/36Pb/2Ag, 60Sn/Pb40, 43Sn/43Pb/14Bi and 42Sn/58Bi.

Powder Distribution

Micron Size	Type	Pitch Requirements
75 - 45	Type-2	24mil & above
45 - 25	Type-3	16mil to 24 mil
38 - 20	Type-4	12mil to 16mil
25 - 15	Type-5	<12mil
15 - 5	Type-6	<8mil

Available Packaging

The following packaging options are available for stencil printing and dispensing applications: 250g and 500g jars; 250g and 700g cartridges; 750g ProFlow® cassettes; 35g and 100g syringes; 2,500g FreshMix® Kits.

Stencil Life

>8 hrs. @ 30–45% RH & 22–25°C
~4 hrs. @ 45–70% RH & 22–25°C

Viscosity

Printing applications: 650 to 850Kcps +/-10%
Dispensing applications: 425Kcps +/-10%
Tested according to IPC-TM-650

Tack Value

Typical tackiness: 35g force

Printing

The print definition of NC-559-AS is ideal for fine pitch applications. The stencil life of this no-clean product virtually eliminates waste of solder paste. Consult the powder distribution chart to determine your mesh size requirements.

Printer Operation

The following are general guidelines for stencil printer optimization with NC-559-AS. Some adjustments may be 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 99% isopropyl alcohol (IPA) works well.

Storage and Handling Procedures

Refrigerated storage at 42–47°F will prolong the solder paste shelf life to no less than 6 months. 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). NEVER FREEZE SOLDER PASTE.

(continued)

NC-559-AS Halogen Free No-Clean Solder Paste

NC-559-AS No-Clean Solder Paste

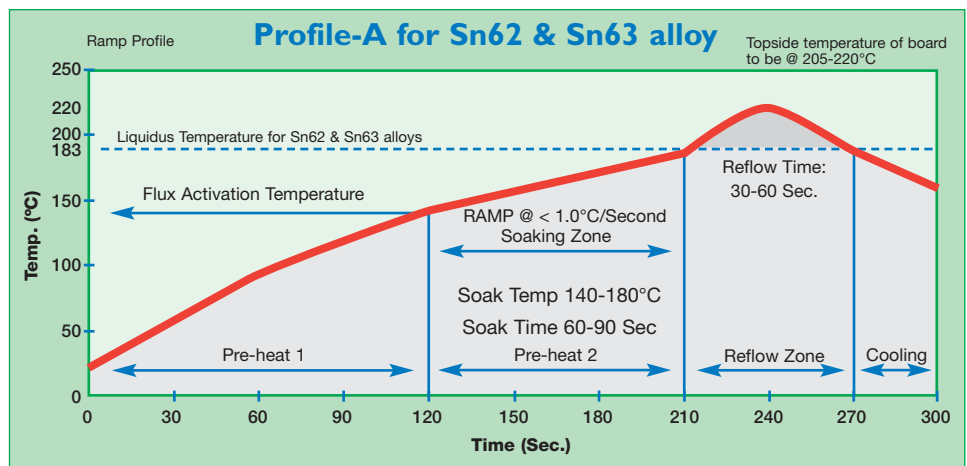
P.O. Box 989
 Deep River, CT 06417
 Toll free: 800.435.0317
 Phone: 860.526.8300
 Fax: 860.526.8243
www.amtechsolder.com

J-STD-004 (IPC-TM-650) Test Results

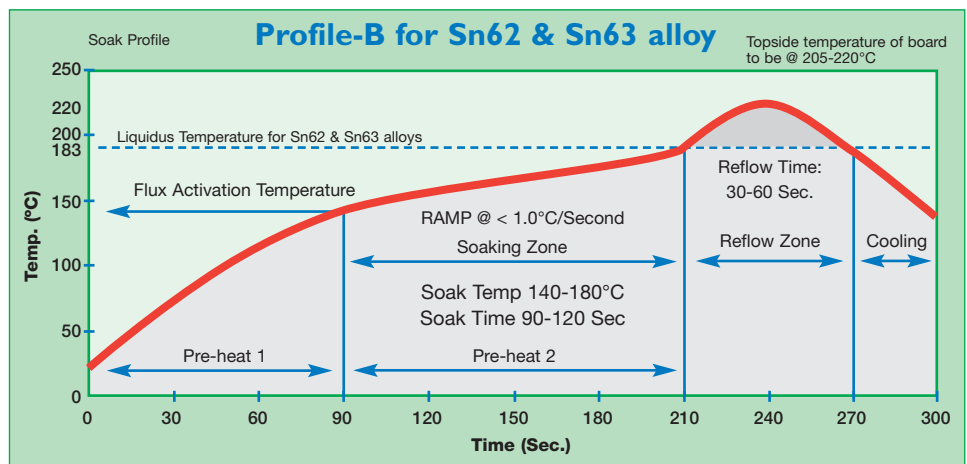
Test	Standard	Values	Results
Flux Designator	IPC-TM-650 2.3.35	NA	RELO
Copper Mirror	IPC-TM-650 2.3.32	NA	PASS
Silver Chromate	IPC-TM-650 2.3.33	NA	PASS
Bono Mirror Test	<10%	1.30%	PASS
SIR Test	IPC-TM-650 2.6.3.3	2.66E+10	PASS

Recommended Profiles:

Profile-A was designed to serve as a starting point for process optimization using NC-559-AS. 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.



A profile utilizing a soak of up to two minutes at 155°C may help to minimize voiding in BGA assemblies. This will allow more time for solvent components of the solder paste to outgas prior to reflow.



The information contained herein is based on technical data that we believe to be reliable and is intended for use by persons having technical skill, at their own risk. Users of our products should make their own tests to determine the suitability of each product for their particular process. AMTECH will assume no liability for results obtained or damages incurred through the application of the data presented.

AMTECH
 Advanced SMT Solder Products

UNIVERSITY MICROFILMS