EN: This Datasheet/Document is presented by the manufacturer.

Please visit our website for pricing and availability at www.hestore.hu.

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NC-559-ASM, No-Clean Solder Paste

Product Data Sheet

Product Highlights

- ROL0 flux classification
- Exceptional print definition at high printing speeds up to 100mm/sec
- Long stencil life
- Wide process window
- Clear residue
- Low voiding
- Excellent wetting compatibility on most board finishes
- Compatible with enclosed print heads
- Compatible with high temperature alloys (221-300 °C)
- Print & Dispense grade solder paste available

Available Alloys

Alloy	Temp °C	Temp °F
63Sn/37Pb	183	361
62Sn/36Pb/2Ag	179	354
62.8Sn/36.8Pb/0.4Ag	179-183	354-361
60Sn/40Pb	183-191	361-376
43Sn/43Pb/14Bi	144-163	291-325
42Sn/58Bi	138	280
10Sn/88Pb/2Ag	268-290	514-554

Packaging

500 gram jars
500 gram cartridges
35 or 100 gram syringes
ProFlow cassettes

Test Results

Test J-STD-004 or other requirements (as stated)	Test Requirement	Result
Copper Mirror	IPC-TM-650: 2.3.32	L: No breakthrough
Corrosion	IPC-TM-650: 2.6.15	L: No Corrosion
Quantitative Halides	IPC-TM-650: 2.3.28.1	L: <0.5%
Electrochemical Migration	IPC-TM-650: 2.6.14.1	L: <1 decade drop (No-clean)
Surface Insulation Resistance 85 °C, 85% RH @ 168 Hours	IPC-TM-650: 2.6.3.7	L: ≥100 MΩ (No-clean)
Tack Value	IPC-TM-650: 2.4.44	54g
Viscosity - Malcom @ 10 RPM/25 °C ($x10^3$mPa/s)- Sn63/Pb37 T3/T4	IPC-TM-650: 2.4.34.4	Print: 210-300 Dispensing: 100-140
Visual	IPC-TM-650: 3.4.2.5	Clear and free from precipitation
Conflict Minerals Compliance	Electronic Industry Citizenship Coalition (EICC)	Compliant
REACH Compliance	Articles 33 and 67 of Regulation (EC) No 1907/2006	May contain up to 1% w/w of ethoxylated 4-nonylphenol

NC-559-ASM, No-Clean Solder Paste

Printer Operation

The following are general guidelines for stencil printer optimization with NC-559-ASM. Some adjustments may be necessary based on your process requirements.

Print Speed: 25-100 mm/sec
Squeegee Pressure: 70-250g/cm of blade
Under Stencil Wipe: Once every 10-25 prints, or as necessary

Stencil Life

>12 hours @ 30-45% RH and 20-25 °C
~ 4 hours @ 45-75% RH and 20-25 °C

Cleaning

NC-559-ASM is a no-clean solder paste that can be left on the board for many SMT assemblies. For applications requiring cleaning, NC-559-ASM can be cleaned using commercially available flux residue removers such as Kyzen Aquanox A4241, A4520, A4625 and A4625B (Batch Cleaners). Kyzen brand cleaners are available from Amtech.

Amtech Low Oxide Powder Distribution

Micon Size	Type	Pitch Requirements
45 - 75µ	Type-2	24 mil and above
25 - 45µ	Type-3	16 - 24 mil
20 - 38µ	Type-4	12 - 16 mil
15 - 25µ	Type-5	8 - 12 mil
5 - 15µ	Type-6	5 - 8 mil
2 - 11µ	Type-7	< 5 mil

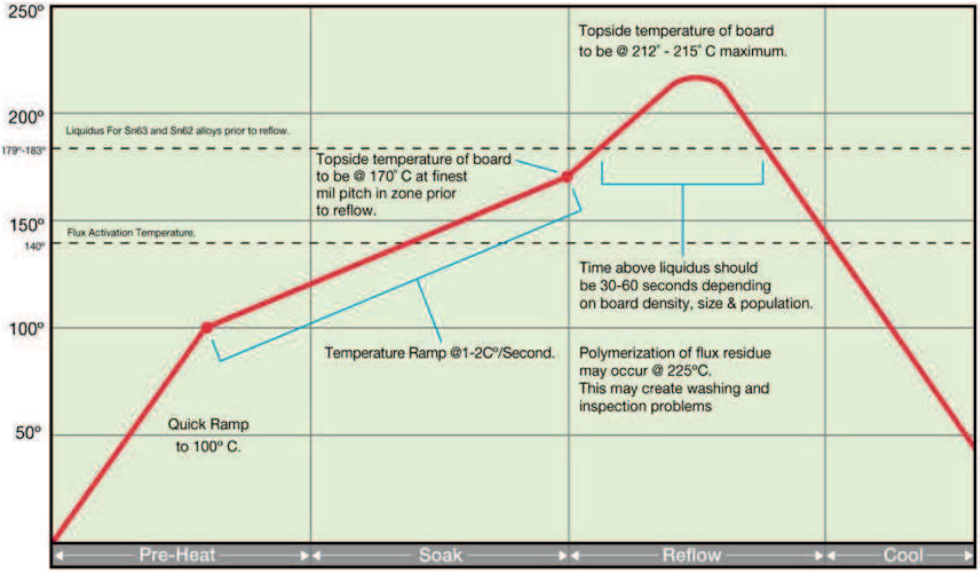
Note: Type-6 and Type-7 may not be available in certain alloys.
Other powder distributions are available on request.

Storage

Solder paste should be stored between 3-8 °C (37-46 °F) to obtain the maximum refrigerated shelf life of six months. Unopened solder paste stored at room temperature, 25 °C (77 °F) will have a one month shelf life. Syringes and cartridges should be stored vertically in the refrigerator with the dispensing tip down. Allow 4-8 hours for solder paste to reach an operating temperature of 20-25 °C (68-77 °F). Keep the solder paste container sealed while warming the solder paste to operating temperature. **NEVER FREEZE SOLDER PASTE**.

Recommended Profile

This profile is designed to serve as a starting point for process optimization using NC-559-ASM. To achieve better results with voiding or to reduce tombstoning, consider using a longer soaking zone, (140-180 °C) for 60-90 seconds, with a rapid pre-heat stage. If there is evidence of solder de-wetting, consider lowering the peak reflow temperature, or reduce the time above liquidus to <60 seconds.



AMTECH Part Numbers

NC-559-ASM 63Sn/37Pb, Type 3, 500 gram jar: Part Number: 13230
NC-559-ASM 63Sn/37Pb, Type 4, 500 gram jar: Part Number: 13260
NC-559-ASM 62Sn/36Pb/2Ag, Type 3, 500 gram jar: Part Number: 13195
Other alloy and packaging combinations available upon request.

Revised February 3, 2014