

NC-559-ASM Tacky Flux & Solder Paste

Technical 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
- Compatible with enclosed print heads
- Compatible with high temperature alloys (221-300 °C)
- Excellent wetting compatibility on most board finishes
- Print and dispense grade solder paste available

Available Alloys

Alloy	Temp °C
Sn63/Pb37	183
Sn62/Pb36/Ag2	179
Sn62.8/Pb36.8/Ag0.4	179-183
Sn60/Pb40	183-191
Sn43/Pb43/Bi14	144-163
Sn42/Bi58	138
Sn10/Pb88/Ag2	268-290

Compliance



Packaging

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

Test J-STD-004 or other requirements (as stated)

Result

Flux Viscosity - Malcom @ 10 RPM/25 °C (x10 ³ mPa/s) IPC-TM-650: 2.4.44	40-52
Tack Value IPC-TM-650: 2.4.44	54g
Paste Viscosity - Malcom @ 10 RPM/25 °C (x10 ³ mPa/s) IPC-TM-650: 2.4.34.4	Print: 210-300 Dispensing: 100-140
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: <.05%
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)
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

Printer Operation

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

- Print Speed: 25-125 mm/sec
- Squeegee Pressure: 70-250g/cm of blade
- Under Stencil Wipe: Once every 10-25 prints, or as necessary

Stencil Life

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

Powder Distribution

Micron Size	Pitch Requirements
T2 - (45-75µm)	24 mil and above
T3 - (25-45µm)	16-24 mil
T4 - (20-38µm)	12-16 mil
T5 - (15-25µm)	8-12 mil
T6 - (5-15µm)	5-8 mil
T7 - (2-11µm)	< 5 mil

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

Cleaning

ROL0/REL0 materials do not require cleaning for most SMT assemblies. For applications requiring cleaning consider using commercial residue removers.

Storage

Tacky flux should be stored at room temperature (20-25 °C). Properly stored tacky flux has up to 24 month shelf life. Unlike solder paste, flux does not require refrigeration. Solder paste should be stored between 3-8 °C (37-46 °F) to obtain the maximum refrigerated shelf life of 12 months. Unopened solder paste stored at room temperature, 25 °C (77 °F) will have a one month shelf life. Allow 4-8 hours for solder paste to reach an operating temperature of 20-25 °C (68-77°F). Syringes and cartridges should be stored vertically in the refrigerator with the dispensing tip down. Keep the solder paste container sealed while warming the solder paste.

NEVER FREEZE ANY SOLDERING MATERIAL.

Recommended Profile

This profile is designed to serve as a starting point for process optimization. To achieve better results with voiding or to reduce tombstoning, consider using a longer soaking zone, 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 <60-90 seconds.

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Profile for Sn96.5/1.5g3.0/Cu0.5; Sn96.5/1.5g3.5; and Sn99.0/1.0g0.3/Cu0.7 Alloys

