NC273LT NO CLEAN SOLDER PASTE

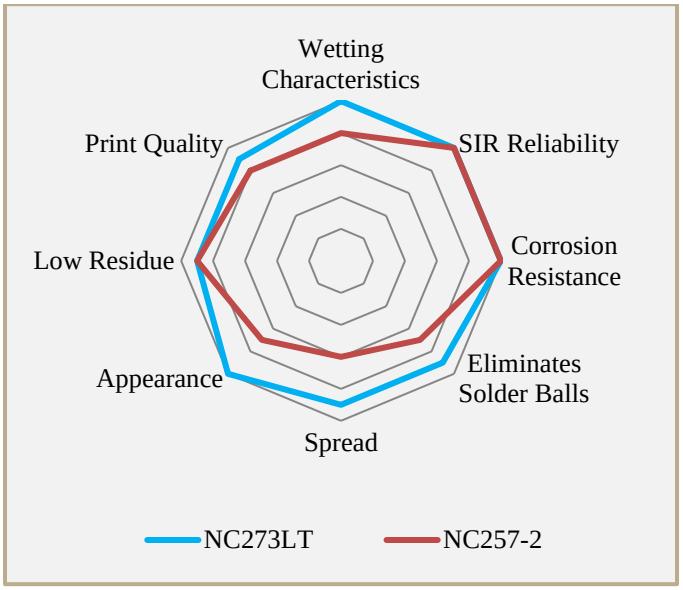
FEATURES

- Designed for Low Temperature Applications
- RoHS Compliant
- Improved Wetting for Bismuth Alloys
- Minimizes Solder Balling
- >8 Hour Stencil Life

DESCRIPTION

The revolutionary activator system in AIM's NC273LT low temperature solder paste improves the wetting performance of bismuth alloys to RoHS compliant plating and surface finishes. NC273LT provides long stencil life, excellent transfer efficiencies and minimizes solder balling common to high bismuth alloys. When thermal exposure during the assembly process is a limitation, NC273LT is an excellent RoHS compliant replacement. Bismuth bearing solder pastes reduce peak reflow temperature requirements to as low as 170°C-185°C (338°F-365°F). As with any bismuth containing alloy the assembly must be completely Pb-free.

CHARACTERISTICS



HANDLING & STORAGE

PARAMETER	TIME	TEMPERATURE
Sealed Frozen Shelf Life	6 Months	< 0°C (32°F)
Sealed Refrigerated Shelf Life	4 Months	0°C-12°C (32°F-55°F)
Sealed Unrefrigerated Shelf Life	2 Weeks	< 25°C (< 77°F)

Do not add used paste to unused paste. Store used paste separately; keep unused paste tightly sealed with internal plug or end cap in place. After opening, solder paste shelf life is environment and application dependent. See AIM's paste handling guidelines for further information. Alloy and storage conditions may affect shelf life. Please refer to NC273LT Certificate of Analysis for product specific information.

CLEANING

NC273LT residues can remain on the assembly after reflow and do not require cleaning. Where cleaning is mandated, AIM has worked closely with industry partners to ensure that NC273LT residues can be effectively removed with common defluxing agents. Contact AIM for cleaning compatibility information.

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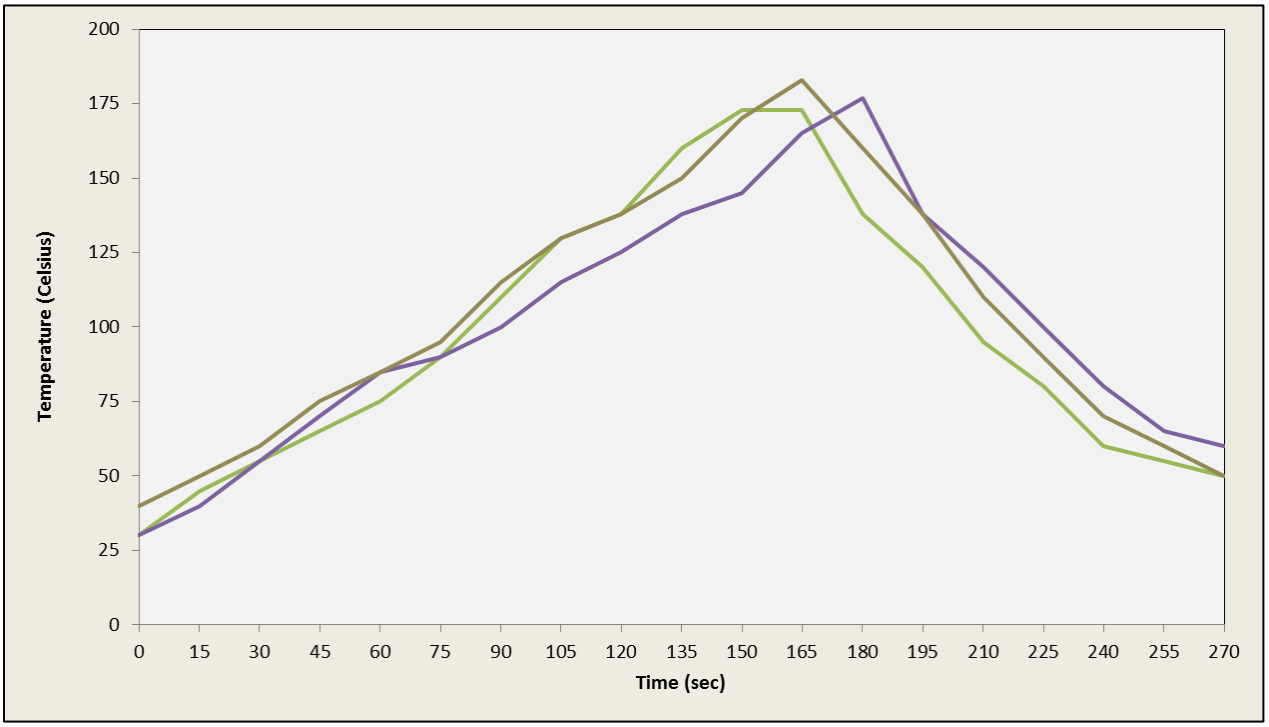
REFLOW PROFILE

The shaded area below indicates the profile process window, your profile may differ. Component limitations, oven efficiency, board size/mass, component type and density will influence the optimized reflow profile. These recommendations are guidelines. Contact AIM for profiling assistance.



RATE OF RISE 1-3° C/SEC MAX	RAMP TO 100° C (212° F)	PROGRESS THROUGH 100° C-140° C (212° F-284° F)	TO PEAK TEMP 170° C-185° C (338° F-365° F)	TIME ABOVE 138° C (280° F)	COOLDOWN ≤ 4 ° C/SEC	TIME TO SPIKE
	≤ 75 Sec	30-60 Sec	45-75 Sec	50-80 Sec	45± 15 Sec	2.75-3.5 Min

PRINTING

RECOMMENDED INITIAL PRINTER SETTINGS - DEPENDENT ON PCB AND PAD DESIGN	
Parameter	Recommended Initial Settings
Squeegee Pressure	0.9 -1.5 lbs/inch of blade
Squeegee Speed	0.5 - 6 inches/second
Snap-off Distance	On Contact 0.00 mm
PCB Separation Distance	0.75 - 2.0 mm
PCB Separation Speed	3 - 20 mm/second

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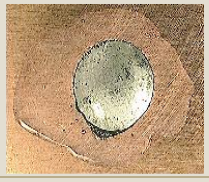
TEST DATA SUMMARY

NAME	TEST METHOD	RESULTS	
IPC Flux Classification	J-STD-004A 3.2.3.1	ROL0	
IPC Flux Classification	J-STD-004B 3.3.1.2.1	ROL1	
NAME	**TEST METHOD**	**TYPICAL RESULTS**	**IMAGE**
Copper Mirror	J-STD-004B 3.4.1.1 IPC-TM-650 2.3.32	LOW	
Corrosion	J-STD-004B 3.4.1.2 IPC-TM-650 2.6.15	PASS	Before  After 
Quantitative Halides	J-STD-004B 3.4.1.3 IPC-TM-650 2.3.28.1	Br: 0.23% Cl: 0.0% Typical	
Qualitative Halides, Silver Chromate	J-STD-004B 3.5.1.1 IPC-TM-650 2.3.33	PASS	
Qualitative Halides, Fluoride Spot	J-STD-004B 3.5.1.2 IPC-TM-650 2.3.35.1	No Fluoride	
Surface Insulation Resistance	J-STD-004B 3.4.1.4 IPC-TM-650 2.6.3.7	PASS	
Flux Solids, Nonvolatile Determination	J-STD-004B 3.4.2.1 IPC-TM-650 2.3.34	3.17 Typical	
Acid Value Determination	J-STD-004B 3.4.2.2 IPC-TM-650 2.3.13	159.4 mg KOH/ g flux	
Flux Specific Gravity Determination	J-STD-004B 3.4.2.3 ASTM D-1298	0.98 Typical	

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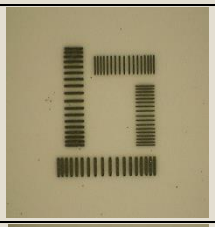
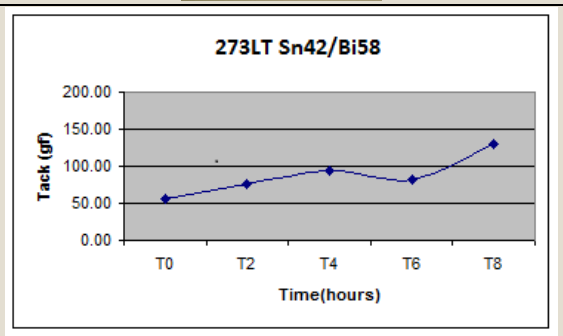
NAME	TEST METHOD	TYPICAL RESULTS	IMAGE
Viscosity	J-STD-005A 3.5.1 IPC-TM-650 2.4.34	Print Formula: 750kcps Typical Dispense Formula: 400kcps Typical	
Visual	J-STD-004B 3.4.2.5	Gray, Smooth, Creamy	
Slump	J-STD-005A 3.6 IPC-TM-650 2.4.35	PASS	
Solder Ball	J-STD-005A 3.7 IPC-TM-650 2.4.43	PASS	
Tack	J-STD-005A 3.8 IPC-TM-650 2.4.44	55.3gf Typical	
Wetting	J-STD-005A 3.9 IPC-TM-650 2.4.45	PASS	

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