



# DEVELOPMENTAL PRODUCT TECHNICAL DATA SHEET

CATEGORY: **NO CLEAN PIN PROBE TESTABLE SOLDER PASTE**  
 NAME: **NC271**  
 ALLOY: **Sn42/Bi57/Ag1**

## FEATURES

- BROAD PRINTING & REFLOW PROCESS WINDOWS
- COMPATIBLE WITH TIN-BISMUTH ALLOYS
- DESIGNED FOR LOW-TEMPERATURE APPLICATIONS

## DESCRIPTION

**NC271** has been developed to offer compatibility with tin-bismuth and tin-bismuth-silver alloys for low temperature lead-free soldering applications. NC271 offers broad process windows for printing, placement and reflow applications. NC271 also offers high humidity tolerance and a chemistry developed for use in air reflow. Slump and humidity tolerances found in NC271 extend the solder pastes useable life in facilities where environmental control is not at its optimum.

## STANDARD PASTE COMPOSITION

Application Method	IPC Powder Type	Metal Load
Standard Stencil Printing	3	90%
Fine Pitch Stencil Printing	4	89.5%
Ultra-Fine Pitch Stencil Printing	5	89%
Dispensing syringes	3	85%
Note: These are typical starting guidelines. To achieve optimal performance, actual metal load and particle size may vary per process, application, and environment.		

## HANDLING

- NC271 has a refrigerated shelf life of 3 months at 4°C.
- Allow the solder paste to warm completely and naturally to ambient temperature (8 hours is recommended) prior to breaking seal for use.
- Mix the product lightly and thoroughly (1 to 2 minutes max.) to ensure even distribution of any separated material resulting from storage.
- Do not store new and used paste in the same container. Re-seal any opened containers while not in use.
- Replace the internal plug in conjunction with the cap of the 500 gram jar to ensure the best possible seal.

## PRINTER SETUP

Below are the suggested starting parameters for your screen printer. Assumptions were made as to the printer types used in today's applications, and adjustments will vary between equipment, application and facility environment.

SNAP-OFF DISTANCE	<b>ON CONTACT (0.00")</b>	SQUEEGEE PRESSURE	<b>.6 - .7 LBS/IN. OF BLADE</b>
PCB SEPARATION DISTANCE	<b>.030-.050"</b>	SQUEEGEE STROKE SPEED	<b>.5 - 6 IN/SEC *</b>
PCB SEPARATION SPEED	<b>MEDIUM</b>	<b>* DEPENDENT ON PCB AND PAD DESIGNS</b>	

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## PASTE APPLICATION

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- Apply sufficient paste to the stencil to allow a smooth, even roll during the print cycle. A bead diameter of 1/2 to 5/8 inch is normally sufficient to begin.
- Apply small amounts of fresh solder paste to the stencil at frequent, controlled intervals to maintain paste chemistry and workable properties.
- Cleaning of your stencil will vary according to the application; however, it can be accomplished using AIM 200AX-10 stencil cleaner. Use 200AX-10 in moderation and remove any excess cleaner from the stencil surface.
- NC271 provides the necessary tack time/force for today's high-speed placement equipment. Ensuring proper support of PCBs during assembly and handling will enhance product performance and reliability.
- For technical advice, consult the AIM web page at [www.aimsolder.com](http://www.aimsolder.com) or contact AIM.

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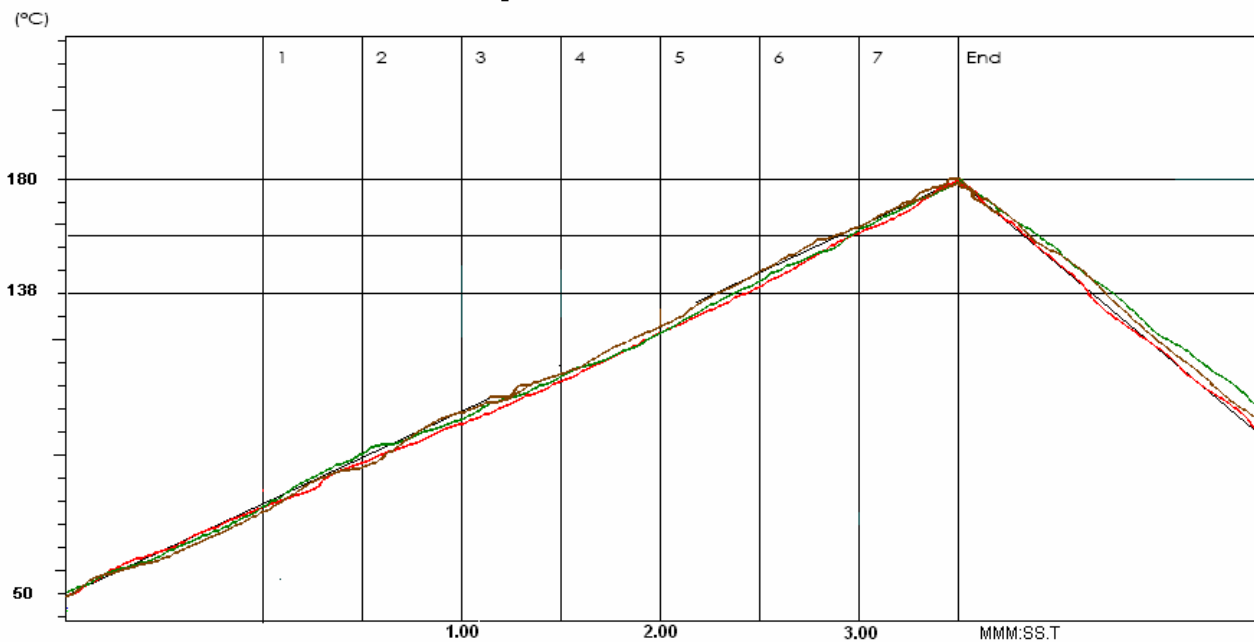
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## REFLOW DATA

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Sn42/Bi57/Ag1 NC271: Recommended Profile



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## CLEANING

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NC271 can be cleaned, if necessary, with saponified water or an appropriate solvent cleaner.

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## SAFETY

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- Use with adequate ventilation and proper personal protective equipment.
- Refer to the accompanying **Material Safety Data Sheet** for any specific emergency information.
- Do not dispose of any lead-containing materials in non-approved containers.

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