

PRODUCT DATA SHEET

SnPb PicoShot® NC-5M

Jetting Solder Paste

Introduction

Indium Corporation's **PicoShot® NC-5M** jetting solder paste is a no-clean, halogen-free material specifically formulated to be compatible with Mycronic jetting systems. Inherently chemically compatible with Indium12.8HF Solder Paste, **PicoShot® NC-5M** is optimized for long-term jetting. **PicoShot® NC-5M** provides exceptional jetting performance, and its unique oxidation barrier promotes complete powder coalescence during reflow to eliminate graping and similar reflow issues. This material is formulated with a tin-lead (SnPb) alloy.

Features

- Developed in association with Mycronic for their MY series jetting systems
- Exceptional jetting performance
 - Precision deposit (x, y) targeting
 - Long usage (syringe) life >8 hours
 - Minimal satellites
- Compatible with Indium12.8HF Solder Paste series
- No-clean paste meets IPC J-STD-004B with Amendment 1 ROLO requirements
- Exceptional electrical reliability
 - SIR and ECM exceed IPC standards
- Unique flux oxidation barrier promotes complete powder coalescence during reflow
 - Minimizes graping
- Clear residue with minimal flow-out
- Reduces head-in-pillow (HIP) defects
- Minimal reflow spatter compared to similar solder pastes

Packaging

- Paste is available airlessly packaged in specialty 30cc syringes to suit Mycronic equipment at 100g/syringe jetting settings
- Optimized for MY600 and 700 systems
- Ejector type:
 - AG04
- Sn63 PicoShot® NC-5M Type 5, 86.0%

Storage and Handling

Refrigerated storage will prolong the shelf life of solder paste. Solder paste packaged in syringes should be stored tip down. Solder paste should be allowed to reach ambient working temperature prior to use. Generally, paste should be removed from refrigeration at least 2 hours before use. Actual time to reach thermal equilibrium will vary with container size and ambient conditions such as local air flow. Paste temperature should be verified before use.

Storage Conditions (unopened containers)	Shelf Life
<-10°C	6 months

Standard Product Specifications

Industry Standard Test Results and Classification			
Flux Classification	ROLO	Typical Solder Paste Viscosity (Malcom) for SnPb T5 (Poise)	560
Based on the testing required by IPC J-Standard-004B with Amendment 1.		Conforms with all requirements from IPC J-Standard-005A.	
Halogen-free per IEC 61249-2-21, Test Method EN14582	<900ppm Cl <900ppm Br <1,500ppm Total		

*All information is for reference only.
Not to be used as incoming product specifications.*

From One Engineer To Another®



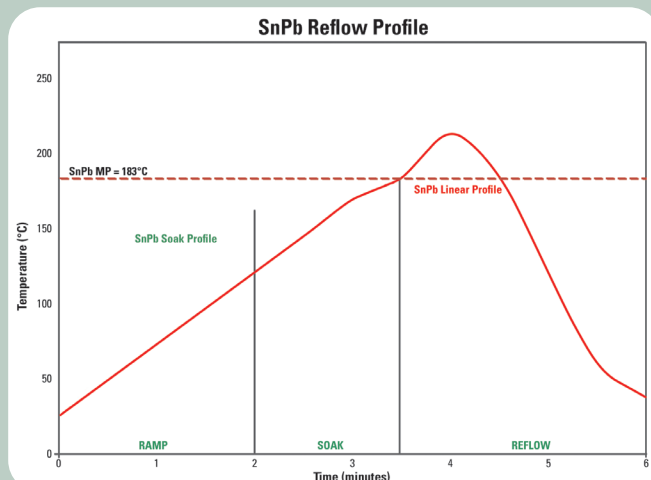
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Reflow

Recommended Profile:



Start with the linear profile, then move to the optional soak profile, if needed.

- Preheat ramp rate
 - 1.8–2.2°C/second is typical
- Peak temperature
 - 205–230°C
- Time above liquidus
 - 30–40 seconds
- Ambient to peak
 - 2–3 minutes
- Atmosphere
 - Designed for air reflow
 - Nitrogen (<200ppm O₂) may be used to enhance wettability onto challenging surfaces, but will generally not be needed

The standard alloy for PicoShot® NC-5M is SAC305; this product is available for site-specific qualifications. Please contact an Indium Corporation Technical Support Engineer for more information.

Cleaning

PicoShot® NC-5M is designed for no-clean applications; however, the flux can be removed, if necessary, using commercially available flux residue cleaners. Indium Corporation's Technical Support team can advise, as needed.

Complementary Products

- **Equipment Conditioner:** PicoShot® Conditioner C-1
- **Solder Paste:** Indium12.8HF
- **Rework Flux:** TACFlux® 020B
- **Tacky Flux:** TACFlux® 089HF
- **Cored Wire:** CORE 230-RC
- **Wave Flux:** WF-9945, WF-9958

Technical Support

Indium Corporation's internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all facets of Materials Science as it applies to the electronics and semiconductor sectors, Technical Support Engineers provide expert advice in solder properties, alloy compatibility and selection of solder preforms, wire, ribbon, and paste. Indium Corporation's Technical Support Engineers provide rapid response to all technical inquiries.

This product data sheet is provided for general information only. It is not intended, and shall not be construed, to warrant or guarantee the performance of the products described which are sold subject exclusively to written warranties and limitations thereon included in product packaging and invoices. All Indium Corporation's products and solutions are designed to be commercially available unless specifically stated otherwise.

All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified. Indium Corporation is an ISO 9001:2015 registered company.

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