

PRODUCT DATA SHEET

PicoShot® NC-6M

Jetting Solder Paste

Introduction

Indium Corporation's **PicoShot® NC-6M** 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-6M** is optimized for small dot jetting and long-term jetting. **PicoShot® NC-6M** 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 capable of the smallest dot volume performance among qualified Type 6 Mycronic jetting pastes. This material has one qualified configuration, with a SAC305 alloy, 83% metal load, T6SGS powder.

Features

- Developed in association with Mycronic for their MY-Series jet printers
- Exceptional jetting performance with Type 6 powder
 - Precision deposit (x,y) targeting
 - Long usage life (>8 hours)
 - Minimal satellites
- Capable of an individual dot diameter range of 230–280µm
- Capable of an individual dot volume range of 1.6–2.6nL
- Exceptional single dot volume and positional repeatability (within 3 sigma)
- Compatible with Indium 12.8HF solder paste
- 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

Standard Product Specifications

Industry Standard Test Results and Classification			
Flux Classification	ROLO	Typical Solder Paste Viscosity for SAC305 T6SGS (Poise)	510
Based on the testing required by IPC J-Standard-004B		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.*

Mycronic Ejector Model AR01	Min.	Max.
Dot Diameter	230µm	280µm
Dot Volume	1.6nL	2.6nL
Jetting height over PCB	550µm	
Single Dot Volume Repeatability	9%	9%
Single Dot Positional Repeatability, 3σ	43µm	30µm

Packaging and Product Configuration

- 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
 - AR01
- Cassette model for this paste is set by a barcode supplied by Mycronic
- This product is qualified with one IPN: SAC305
PicoShot NC-6M Type 6SGS, 83%

From One Engineer To Another®

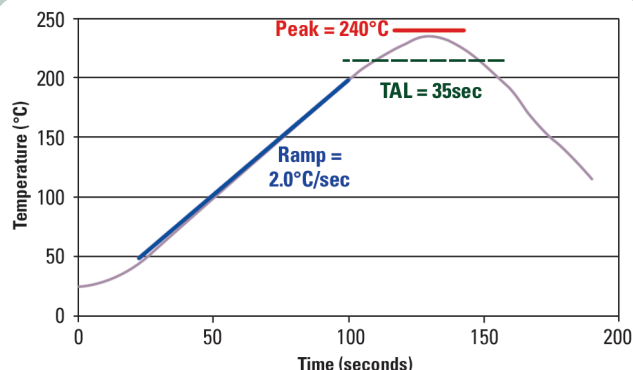


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Reflow

Recommended Profile:



Standard ramp-to-spike (linear) profile is preferred.

- Preheat ramp rate
 - 1.8–2.2°C/second is typical
 - Avoid using profiles with a plateau temperature above 180°C, to prevent excessive flux burn-off
- Peak temperature
 - 235–245°C
- Time above liquidus
 - 30–40 seconds
- Ambient to peak
 - 2–3 minutes
- Atmosphere
 - Designed for air reflow
 - Nitrogen (<100ppm O₂) will enhance reflow and wettability onto challenging surfaces

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

Cleaning

PicoShot® NC-6M 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:** Indium8.9HF, Indium12.8HF
- **Rework Flux:** TACFlux® 020B-RC
- **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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