

PRODUCT DATA SHEET

SAC305 PicoShot® WS-5M

Jetting Solder Paste

Introduction

Indium Corporation's **PicoShot® WS-5M** jetting solder paste is a water-soluble, halogen-free material specifically formulated to be compatible with Mycronic jetting systems. Inherently chemically compatible with Indium 6.6HF-HD Solder Paste, **PicoShot® WS-5M** is optimized for long-term jetting. **PicoShot® WS-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 SAC305 alloy and is classified as "jettable."

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 Indium 6.6HF-HD 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

Packaging

- **PicoShot® WS-5M** is available with the following attributes:
 - SAC305 **PicoShot® WS-5M** Type 5, 83.5%
- Paste is available airlessly packaged in specialty 30cc syringes to suit Mycronic equipment, at 100g/syringe jetting settings
- Optimized for MY600 and 700 systems

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 syringes)	Shelf Life
<-10°C	6 months

Standard Product Specifications

Industry Standard Test Results and Classification			
Flux Classification	ORH0	Typical Solder Paste Viscosity (Malcom) for SAC305 T5 (Poise)	680
Based on the testing required by IPC J-STD-004B		Conforms with all requirements from IPC J-STD-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.

Complementary Products

- **Equipment Conditioner:** PicoShot® Conditioner C-1
- **Solder Paste:** Indium 6.6HF-HD
- **Rework Flux:** TACFlux® 66HF
- **Cored Wire:** CW-305
- **Wave Flux:** 1095-NF, WF-1082

From One Engineer To Another®



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Cleaning

PicoShot® WS-5M flux residue is cleanable up to at least 72 hours after reflow and is best cleaned using DI water with a spray pressure of at least 40psi and a temperature of at least 40°C. These parameters are a function of board complexity and cleaner efficiency. Electrical testing should be performed after the flux residue is removed.

Technical Support

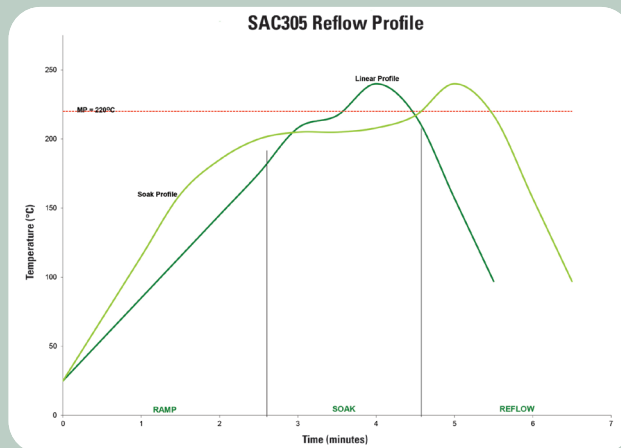
Indium Corporation's internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all facets of Materials Science as it applies to the electronics and semiconductor sectors, Technical Support Engineers provide expert advice in solder properties,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

Safety Data Sheets

Please refer to the SDS document within the product shipment, or contact our local team to receive a copy.

Reflow

Recommended Profile:



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

- Preheat ramp rate
 - 1.0–2.5°C/second is typical
- Peak temperature
 - 230–260°C
- Time above liquidus
 - 45–60 seconds
- Atmosphere
 - Designed for air reflow
 - Nitrogen (<200ppm O₂) may be used to enhance wettability onto challenging surfaces, but will generally not be needed

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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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