PRODUCT DATA SHEET

MicroDispense

Solder Paste Series

Introduction

MicroDispense solder pastes include no-clean (NC) and water-soluble (WS) solder pastes and are used with SnAgCu and SnPb alloy systems. These pastes are designed for microdispense and jetting applications. The **MicroDispense** pastes are compatible with their corresponding printable solder pastes, as identified in the table below. It is important that they only be used with the matched printable solder paste.

These products are designed for reflow in air or in a nitrogen atmosphere of 100-ppm oxygen or less. **MicroDispense** solder pastes are specifically formulated for fine-pitch and ultra-fine dispensing for various applications as well as giving reliable dispensing of a consistent size deposit in automated dispensing or jetting equipment.

Alloys

Indium Corporation manufactures low-oxide spherical powder composed of a variety of Pb-free and Pb-containing alloys that cover a broad range of melting temperatures. The standard product offerings for **MicroDispense** pastes are detailed in the following table. Please contact us for other available alloys.

Alloy	Liquidus (°C)	Solidus (°C)
SAC305 (96.5Sn/3Ag/0.5Cu)	220	217
Sn63 (63Sn/37Pb)	183 Eutectic	-

Features

- Rheology optimized for ultra-fine dispensing and jetting
- Consistent dispensing deposit level
- Reliable miss-free, clog-free dispensing and jetting
- Uses Type 6-SG powder to ensure consistent product quality
- Excellent solderability
- Airless (bubble-free) packaging

Properties

Refer to property tables found in the corresponding printable solder paste product data sheets.

Cleaning:

MicroDispense no-clean products are designed for no-clean applications; however, the flux can be removed if necessary by using a commercially available flux residue remover.

For **MicroDispense** water- soluble products, the 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 40 psi and a temperature of at least 40°C. These parameters are a function of board complexity and cleaner efficiency.

Packaging

MicroDispense paste is currently available in airless (bubble-free) packaging. For automated dispense and jetting applications, 5cc (15g) and 10cc (25g) syringes are standard packaging. Alternate packaging may be available upon request.

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Standard MicroDispense Printable Paste Specifications

					Compatible Products			
MicroDispense	Printable Solder Paste	Alloy	Powder	No-Clean (NC) Water-Soluble (WS)	Wave Flux (VOC-Free)	Wave Flux (Alcohol-Based)	Flux-Cored Wire	TACFlux®
MD101	Indium10.1	SAC305	T6SG	NC	WF-7742	WF-9958	CW-807	089
MD089	Indium8.9	SAC305	T6SG	NC	WF-7742	WF-9958	CW-807	089
MD089HF	Indium8.9HF	SAC305	T6SG	NC	WF-7745	WF-9958	CW-807	RMA-155
MD092H	Indium92H	Sn63	T6SG	NC	WF-7745	WF-9958	CW-807	RMA-155
MD064R	Indium6.4R	SAC305	T6SG	WS	NA	1095-NF	CW-301	025
MD064R	Indium6.4R	Sn63	T6SG	WS	NA	1095-NF	CW-301	025

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Storage and Handling

MicroDispense paste syringes should be stored tip down at <10°C for a maximum shelf life of 6 months. Storage temperatures should not exceed 30°C for more than 4 days.

Solder paste should be allowed to reach ambient working temperature prior to use. Generally, paste should be removed from refrigeration at least two hours before use. Actual time to reach thermal equilibrium will vary with container size. Paste temperature should be verified before use. Syringes should be labeled with the date and time of opening.

Once removed from cold storage, the solder paste in a sealed syringe may remain at room temperature for up to 72 hours before usage and during usage. However, once outside the syringe, its working life is estimated to be 8 hours, and may be less under high temperature (>25°C) and humidity (>70%RH) conditions.

The paste should not be subjected to multiple cold/heat cycles or viscosity changes and/or flux separation may occur.

Reflow Profiles

Refer to reflow profiles found in the corresponding printable solder paste product data sheets.

Technical Support

Indium Corporation's internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all Facets of Material 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

The SDSs for these products can be found online at http://www.indium.com/sds

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.

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