

Product Description

Dycotec DM-SIP-3063S is a single part screen printable epoxy thermoset silver paste for general printed electronics application use. The paste is compatible with substrates such as PET, FR4, glass and polyimide and should be cured at 140°C for 10 minutes or 185°C for 1 minute.

Product Benefits

- Fast cure thermoset silver paste with excellent chemical resistance
- Excellent screen residence time >8 hours
- Excellent adhesion
- Excellent electrical conductivity (<15 mΩ/□/mil)

Paste Preparation

DM-SIP-3063S is a single part system. Once the paste has been removed from the container for printing, this may introduce contamination. Please do not replace the paste in the container. The paste should be gently stirred before use avoiding incorporation of air bubbles.

Properties of Uncured Paste

Test	Properties
Viscosity after mixing (Pa.s) (Cone & plate, 50s ⁻¹ , 25°C)	3-9
Screen residence time	>8 hours
Thinner	For slight adjustments in viscosity use DM-SIP-3063-DT
Coverage	88 cm ² /g for 19 μm print thickness
Solids Content	92-96 % after 150°C bake for 1 hour

Paste Processing Conditions

Parameter	Typical Properties
Substrate	PET, polyimide, glass, FR4
Screen	325 SS, 13 μm emulsion
Flood speed	50 mm/s
Print speed	35 mm/s
Squeegee type	70A Shore A Durometer
Squeegee Pressure	3 Kg
Squeegee Angle	60°
Print Gap	1.5 mm

The paste can be printed with a single stroke. The paste can be dried using either a convection oven or using IR heating. Typical drying parameters used are 140°C for a minimum time of 10 mins or less than 1 minute at 185°C. Higher temperature curing may allow processing times to be reduced. Print thickness is ~20 μm.

Properties of Cured Paste

Test	Typical Properties
Sheet Resistance	<45 mΩ/□/ 25 μm, 140°C, <15 mΩ/□/ 25 μm, 185°C
Flexibility (ASTM F1683-09)	ΔR<2%, 250 μm width line at 34 mm mandrel diameter
Adhesion	5B
Pencil Hardness	2H at 140°C, 9H at 185°C

Clean-Up

Equipment can be cleaned using ketones such as acetone or isopropanol.

Storage and shelf-life

For optimum results, the containers should be stored at room temperature with lids tightly sealed. The paste shelf-life for an unopened container is 6 months from date of shipment. Avoid introduction of water into the paste. Dycotec Materials cannot assume responsibility for a paste that has not been stored in appropriate conditions or where the pastes have been contaminated following use.

Safety and Handling

For safe use of this product, please review relevant material and safety datasheet (MSDS).

For more information, please contact:

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All information reported in the datasheet is for experimental work undertaken in our laboratories and illustrates typical values only. Processing conditions may vary depending on customers' experience and their application requirements and manufacturing process equipment set-up.

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