

Product Description

DM-SIP-3071S is a cost effective screen printable silver paste for flexible applications such as hybrid printed electronics. The paste is compatible with low temperature substrates such as PET due to its low curing temperature (120-150°C). It offers excellent electrical conductivity at low silver loading.

Product Benefits

- Excellent Electrical Conductivity (<6 mΩ/□/25μm)
- Low temperature processing (120-150°C)
- Low silver content with high surface coverage (148 cm²/g at 10 μm) ensuring cost effective paste system
- Compatible with Dycotec dielectric, carbon and conductive adhesive systems

Paste Preparation

DM-SIP-3071S is supplied as a single part ready to use ink. Gently stir before use, avoiding introduction of air bubbles. Once the paste has been removed from the container for printing, this may introduce contamination. Please do not replace the paste in the container.

Properties of Uncured Paste

Test	Properties
Viscosity after mixing (Pa.s) (Cone & plate, 50s ⁻¹ , 20°C)	8 - 12
Thinner	For slight adjustments in viscosity use DM-SIP-3071-DT
Coverage	148 cm ² /g at 10 μm cured thickness
Solids Content	55 - 58 %
Density	2.0 g/ml

Paste Processing Conditions

Parameter	Typical Properties
Print Process	Manual, semi-automatic or fully automatic screen printing
Substrate	PET, PI
Screen	325 SS (50/30), 13 μm emulsion
Print Method	Print - Flood
Print speed	70 mm/s
Squeegee type	80A Shore

For print process conditions specified above, typical print thickness is 4-5 μm. The paste can be dried using either a convection oven or using IR heating. Typical drying parameters are 120°C-150°C for 1-10 mins. Drying times may be reduced to achieve the optimum resistivity depending on manufacturing process set-up.

Properties of Cured Paste

Test	Typical Properties
Sheet Resistance	<10 mΩ/□/25μm (140°C cure temperature)
Volume Resistivity	<28 μΩ.cm (140°C cure temperature)
Adhesion	5B
Resolution (L/S)	250/250 μm

Clean-Up

Equipment can be cleaned using benzyl alcohol then IPA wipe dry.

Storage and shelf-life

Containers should be stored in a fridge (4-7°C) with lids tightly sealed. The paste shelf-life for an unopened container is 6 months from date of shipment. Please ensure the material has time to reach room temperature before use. 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. More detailed information can be obtained via info@dycotecmaterials.com.

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