

Product Description

Dycotec DM-SIP-3067S is a screen printable silver paste that is used for membrane display, thin film PV and general printed electronics applications. The paste is compatible with low temperature substrates such as polycarbonate and PET due to its low curing temperature (>80°C). Compatible with manual and automatic flat-bed screen printing.

Product Benefits

- Cost effective, low solids content
- Low temperature sintering
- Excellent adhesion
- Excellent electrical conductivity

Paste Preparation

DM-SIP-3067S is a single part paste system. The material should be used within 6 hours of removing the paste from its container. After 6 hours, quality cannot be guaranteed. 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)	5-10
Thinner	For slight adjustments in viscosity use DM-SIP-3067-DT
Coverage	218 cm ² /g at 7.5 µm cured thickness
Solids Content	58-62 %

Paste Processing Conditions

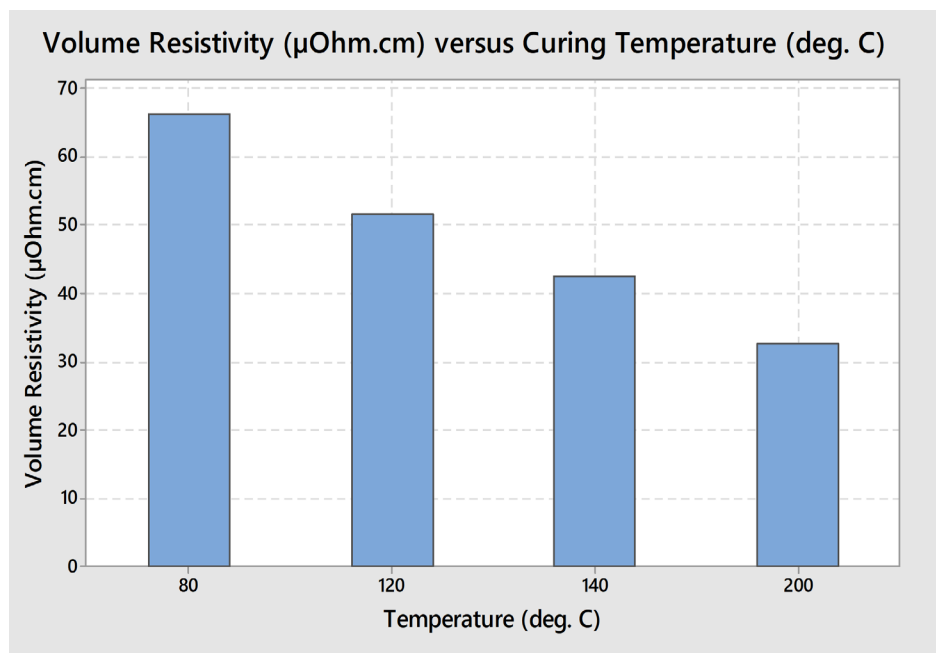
Parameter	Typical Properties
Substrate	PC, PET, textiles, TPU eg Covestro U073, PI, glass, PVC
Screen	325 SS, 13 µm emulsion
Print speed	70 mm/s
Squeegee type	80A Shore
Squeegee Pressure	5 Kg
Squeegee holding angle	60°
Squeegee Length	220 mm
Screen Residence Time	>2 hours

Once printed the silver paste should be dried at 60-80°C for 10-30 mins, followed by curing at 80°C-200°C for ~20 mins using a convection oven or using IR heating.

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	<27 mΩ/□/mil (80°C), <13 mΩ/□/mil (200°C)
Volume Resistivity	<66 µΩ.cm (80°C), <34 µΩ.cm (200°C)
Adhesion	5B (PET, 140°C)
Resolution (L/S)	250 µm/ 100 µm



Durability

Test structures with 100 μm , 250 μm and 500 μm line widths show no change in resistance after processing for 1000 hrs at 85°C/85% relative humidity

Clean-Up

Equipment can be cleaned using benzyl alcohol then wiped dry with isopropanol.

Storage and shelf-life

Containers should be stored in a fridge (4-6°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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