

Product Description

Dycotec DM-SIP-3062S is a screen printable silver paste that is used for smart windows, thin film PV, display and general printed electronics applications. The paste is compatible with glass and transparent conductive coated glass substrates.

Product Benefits

- Low temperature sintering
- Excellent adhesion
- Excellent electrical conductivity

Paste Preparation

DM-SIP-3062S is a single part paste system. The paste should be gently stirred before use avoiding incorporation 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) | 15-20 |
| Screen residence time | Please add diluent after 6 hours if the paste has not been used to compensate for solvent evaporation losses and ensure consistent printing |
| Thinner | For slight adjustments in viscosity use DM-SIP-3062-DT |
| Coverage | 190 cm ² /g |
| Solids Content | 65-75 % |

Paste Processing Conditions

| Parameter | Typical Properties |
|---------------|-------------------------|
| Substrate | TCO-coated glass, glass |
| Screen | 325 SS, 13 μm emulsion |
| Flood speed | 50 mm/s |
| Print speed | 50 mm/s |
| Squeegee type | 80A Shore |

The paste can be dried using either a convection oven or using IR heating. Typical drying parameters used are 140°C for 20 mins. Drying times may be reduced to achieve the optimum resistivity depending on manufacturing process set-up. Typical print thickness after drying is 6-8 μm.

Properties of Cured Paste

| Test | Typical Properties |
|--------------------|--------------------|
| Sheet Resistance | <12 mΩ/□/mil |
| Volume Resistivity | <30 μΩ.cm |
| Adhesion | 5B |
| Resolution (L/S) | 250 μm |

Clean-Up

Equipment can be cleaned using ketones such as acetone.

Storage and shelf-life

For optimum results, the containers should be stored in a fridge (4°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).

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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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