

Product Description

DM-SIP-3028AS is a screen printable silver paste that is used for SPD (Suspended Particle Devices) and PDLC (Polymer Dispersed Liquid Crystals) for bus bar formation for smart glass applications. The ink is compatible with glass and transparent conductive coated glass substrates.

Product Benefits

- Excellent adhesion on TCO coated substrates
- Excellent mechanical wear and durability properties
- Good electrical properties
- Developed for SPD and PDLC Smart Glass applications

Paste Preparation

DM-SIP-3028AS is a single part paste system. 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)	6 - 11
Thinner	For slight adjustments in viscosity use DM-SIP-3028AS
Solids Content	77 - 82 %

Paste Processing Conditions

Parameter	Typical Properties
Substrate	TCO-coated substrates
Screen	325 SS (50/30), 13 μm emulsion
Print Method	Print - Flood
Print speed	70 mm/s
Squeegee type	80A Shore

The paste can be dried using either a convection oven or using IR heating. Typical drying parameters are 140°C for 20-30 mins in a convection oven. 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
Accelerated Lifetime (85°C,85%RH,1000 hrs)	No change in resistance

Clean-Up

Equipment can be cleaned using ethylene glycol butyl ether.

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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