DM-IN-7021S

DYCOTEC MATERIALS

Product Description

Dycotec DM-IN-7021S is a thermally cured screen printed paste for general use as an insulating layer in electronic applications. The screen printed structures are oven cured at 120-130˚C. The high abrasion resistance provides a robust surface for further processing such as printing additional electronic layers on top of the cured insulating layer. The ink can be overprinted with conductive inks provided by Dycotec Materials such as DM-SIP-3060S.

Product Benefits

- Good printability
- Use in sequential build up structures
- Low temperature cure
- Electrically insulating
- Use on flexible substrates

Paste Preparation

DM-IN-7021S is a single part paste system. The paste should be gently stirred before use, avoid rapid stirring to prevent air entrapment. 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 the Uncured Paste

Test	Properties
Viscosity after mixing (Pa.s) (Malvern Kinexus Ultra+, cone and plate $50s^{-1}$, 25°C)	3-8
Substrate compatibility	PET, metals such as silver, copper

Paste Processing Conditions

Parameter	Typical Properties
Screen	180 SS, 13 µm emulsion
Print gap	1.8 mm
Print speed	50 mm/s
Squeegee type	80 shore A
Squeegee pressure	5 Kg (over squeegee length 22.2 cm)
Squeegee holding angle	60˚
Curing temperature	120-130˚C (measured at product)
Minimum Curing time	10 mins

Properties of the Cured Paste

Test	Properties
Pencil hardness scale	>3H (7H if cure for 1 hr at 120°C)
Adhesion	5B on PET
Flexibility (ASTM F1683, 5 cycles)	No change in mechanical properties (10 mm bend radius)
Volume Resistance	>1 x 10^{12} Ω.cm
Voltage Breakdown	>4.5 kV/mm
Colour	Blue

Clean-Up

Equipment can be cleaned using alcohols such as iso-propanol.

Safety and Handling

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

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.

For more information, please contact:

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