DM-SIP-3500S

DYCOTEC MATERIALS

Product Description

DM-SIP-3500S is a screen-printable silver thermoset paste designed for high temperature applications exceeding the standard operating conditions of typical polymer-based silver pastes. Curing between 200-350 °C, the product is suitable for continuous operation at 200-325 °C with intermittent use up to 350 °C, dependent upon cure schedule. Suitable for high temperature heaters and aerospace applications.

Product Benefits

- Excellent electrical conductivity
- Broad range of curing conditions
- High operating temperature

Paste Preparation

DM-SIP-3500S is a single part system. The paste should be stored between 4-7 °C and allowed to come to room temperature before printing. The paste should be gently stirred before use avoiding incorporation of air bubbles. Following the printing of the paste, please be aware that there is a possibility that some contamination may have been introduced into the paste but there is also a possibility that there may be some solvent loss especially with long print runs. It is good practise not to return the used paste to any fresh paste but keep in a separate jar marked "already used".

Properties of Uncured Paste

Test	Properties
Viscosity after mixing (Cone & plate, $50s^{-1}$, 25°C)	25-50 Pa·s
Solids Content	70-75 %
Colour	Silver

Paste Processing Conditions

Parameter	Typical Properties
Substrate compatibility	Glass, PI, ceramics, range of metallisation, DM-INS-7500S
Screen	200-325 SS, 0-30 µm emulsion
Deposition Method	Screen printing
Print Method	Flood-Print
Squeegee type	80A shore
Screen Residence	Time >8 hour
Curing Conditions	200-350 °C
Curing Time	120-30 minutes

Properties of Cured Paste

Test	Typical Properties
Substrate for Calibration	Cured DM-INS-7500S dielectric paste
Sheet Resistivity	25 mΩ/□/25µm(200°C cure) 5 mΩ/□/25µm(350°C cure)
Adhesion (ASTM D3359)	5B
Print Resolution	250 µm Line / 250 µm Space
Glass Transition Temperature (Tg)	365 °C
Onset of Thermal Degradation (T5%)	441 °C

Clean-Up

Equipment can be cleaned using benzyl alcohol, acetone and IPA.

Storage and shelf-life

The paste should be stored as specified, with the lids tightly sealed. We cannot assume responsibility for an paste that has not been stored in appropriate conditions or where the paste has been contaminated following use. The paste can be stored for 6 months at 4-7°C from the date of shipment.

Safety and Handling

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

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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