DM-SIP-14008S-66

DYCOTEC MATERIALS

Product Description

DM-SIP-14008S-66 is a silver cermet paste designed to print solderable electrodes onto ceramic components.
DM-SIP-14008S-66 is specifically formulated for use on zinc oxide substrates for the manufacture of metal oxide varistors (MOVs).

Product Benefits

- Pb, Ni and Cd free
- Good solderability and solder leach resistance with 62Sn/36Pb/2Ag and 95Sn/5Ag
- Excellent adhesion on ZnO

Paste Preparation

Bring paste up to clean room temperature (20-25°C) by storing in the print area at least 2 hours prior to printing. Before use, the paste should be thoroughly but gently stirred with a spatula avoiding incorporation of air bubbles. Thinning of the paste is not recommended but for slight adjustments in viscosity, DM-DIL-0208 may be carefully used.

Properties of Paste

Test	Properties
Viscosity after mixing (Brookfield, Spindle RV-7, 10 rpm, 25.5°C)	50-70 Pa·s
Solids Content	67.5-69.5%
Silver content	65.0-67.0%
Colour	Silver

Paste Printing Conditions

Parameter	Typical Properties
Substrate	Zinc Oxide, Alumina
Screen	80 mesh SS with 10 µm emulsion
Flood/Print speed	25-150 mm/s
Squeegee Hardness	60-80A shore

Paste Processing Conditions

Parameter	Typical Properties
Levelling Time	5-10 mins
Drying Time on Alumina	10-15 mins @140°C
Firing Temperature	850°C peak temperature. Dwell time at peak:10 mins
Total Firing Time	40-60 mins

It is of paramount importance that the air supply to the furnace is clean and dry and free of any contaminants such as oil.

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Properties of Fired Paste

Test	Typical Properties
Substrate for Calibration	Alumina
Sheet Resistance	<3 mΩ/□ (for 12.5µm fired thickness)
Fired print thickness	10-15 µm
Print Resolution	250 µm Line/ 500 µm Space
Solderability	Excellent (SAC 0307, ROM0 flux, 5s dip at 260°C)
Leach Resistance	1+ cycles(SAC 0307, ROM0 flux, 5s dip, 260°C)
Adhesion	>35N (90° wire pull, 2 mm x 2 mm pad, SAC 305, ROL1 flux)

Clean-up

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

Storage and shelf-life

The paste shelf-life for an unopened container is 6 months from date of shipment. 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 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.

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