DM-GRA-9100S

DYCOTEC MATERIALS

Product Description

DM-GRA-9100S is a single part screen printable carbon-graphene hybrid paste for general printed electronic applications such as heaters and sensors. The paste should be cured at >140˚C for 30-60 mins to achieve a sheet resistance of <20 Ω/□/25µm. Tailored pastes can also be provided at increased sheet resistance up to 2,000 Ω/□/ 25µm.

Product Benefits

- Good printability
- Low temperature curing
- Good screen residence time
- Compatibility with low temperature substrates such as PET

Paste Preparation

The paste is a single part system. Gently stir before use. Avoid rapid stirring to prevent air entrapment during the stirring process. Once the paste has been removed from the container for printing, this may introduce contamination. Please do not replace the paste in the original container.

Properties of Uncured Paste

Test	Properties
Viscosity (Kinexus Ultra, $50s^{-1}$)	10 - 16 Pa.s
Thinner	This should normally not be required. If necessary, use DM-DIL-0206 for slight adjustments in viscosity.
Coverage	350 cm^2/g

Paste Processing Conditions

Parameter	Typical Properties
Substrate	PET, Glass, FR4
Screen	SS 180 LPI 45 µm wire 13 µm emulsion
Flood Speed	50 mm/s
Print Speed	70 mm/s
Squeegee hardness	80 Durometer Shore A
Squeegee pressure	4 kg
Squeegee angle	45˚
Cured thickness	10 – 12 µm
Print gap	1 mm
Number of stroke	1

Guideline curing parameters are >140˚C for a minimum of 30 mins in a convection oven.

Properties of Cured Paste

Test	Typical Properties
Typical Print Thickness	10 – 12 µm
Sheet Resistance*	<20 Ω/□/25µm
Adhesion	5B
Pencil hardness scale	H

*High sheet resistance pastes are also available, please contact info@dycotecmaterials.com for more information.

Clean-Up

Equipment can be cleaned using alcohols such as propanol.

Storage and shelf-life

Containers should be stored at room temperature (10 – 25˚C) with lids tightly sealed. The paste shelf-life for an unopened container is 6 months from date of shipment. The material should not be stored at temperature below 0˚C or greater than 25˚C. 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:
Dycotec Materials Ltd
Unit 6, Stanier Road
Porte Marsh Industrial Estate
Calne, Wiltshire, SN119PX, UK
Email: Info@dycotecmaterials.com
Tel: +44 (0)1793 299500
www.dycotecmaterials.com

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