DM-OC-6051S

DYCOTEC MATERIALS

Product Description

DM-OC-6051S is a thermoset polymer protective overcoat for use with Dycotec's range of the thick film resistor and conductor pastes for use on ceramic, stainless steel and PCB substrates. The paste acts as a protective coating, solder-dams and can also be used as a marking ink. The standard product is white in colour but other colour are available on request.

Product Benefits

- Excellent printability, enabling good edge definition for circuits needing high resolution dams between solder pads
- Wide tolerance on thermal processing temperatures (150-250°C)
- Good solvent resistance
- Single part system
- Compatible with SAC solderpaste types

Paste Preparation

Before use, the paste should be thoroughly but gently stirred with a spatula to avoid incorporation of air bubbles.

Properties of the Uncured Paste

Test	Properties
Viscosity after mixing (Pa.s) (Cone & Plate $0.1s^{-1}$, 25°C ± 0.5°C)	>200 (use DM-DIL-0201DT for small adjustments in viscosity)
Solids Loading	88 - 94%
Colour	White

Paste Processing Conditions

Parameter	Typical Properties
Substrate	Ceramic, stainless steel, FR4 and other PCB substrates
Screen	165 mesh/inch SS, 25 µm emulsion
Flood speed	70 mm/s
Print speed	70 mm/s
Squeegee type	80 Shore A
Print Method	Print/flood

Paste Curing Conditions

Test	Properties
Leveling Time	10–15 mins @room temperature
Cure schedule	150°C (2 hours)

Properties of the Cured Ink

Test	Properties
Typical print thickness	20-23 µm (with a 165 mesh)
Adhesion (ASTM D3359)	5B
Dielectric Strength (ASTM D150)	>500V/50µm
Volume Resistivity (ASTM D257)	>1 x $10^{10}\Omega$.cm
Dielectric Constant (ASTM D150)	2.6 (at 1 KHz)
Hardness	3H
Solvent resistance	Good resistance to acetone wipe when fully cured
Substrate for calibration	96% alumina
Solder dip tests 2 dips (SAC 0307, ROM0 flux, 5s dip, 260°C)	No discolouration of white film No lifting of cured film from dielectric or substrate

Clean-Up

Equipment can be cleaned using DB acetate (Diethylene Glycol Monobutyl Ether Acetate) and then wipe dry with isopropanol.

Storage and Shelf-life

Store at 10-25˚C with lids tightly sealed. The paste shelf-life for an unopened container is 6 months from date of shipment. Containers should be stored as specified with lids tightly sealed. Dycotec cannot assume responsibility for an ink that has not been stored in appropriate conditions or where the ink has been contaminated following use.

Safety and Handling

For safe use of this product, please review relevant material safety and 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.

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