

MICROELECTRONIC INTERCONNECT MATERIALS

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Technical Information

5670G Dielectric Paste

The 5670G dielectric paste was developed for the protection of resistors and other circuitry. Its green color absorbs laser energy and results in fast trim speeds. It also provides good protection from water soluble and no-clean solder fluxes and plating baths. Its key features include:

- Resistance to highly concentrated acids.
- Efficient laser trimming.
- Excellent hermeticity.
- Compatibility with most resistor systems.

TYPICAL FIRED FILM CHARACTERISTICS(1)

ColorGREENFiring Temperature 600° CDelta $\mathbb{R}^{(2)}$ $\leq \pm 5\%$ Insulation Resistance
@ 100VDC> 1011 Ohms

- (1) Typical properties are based on testing of several batches under various processing conditions. They are not intended as specification limits.
- (2) The shift in resistance of Koartan 7600 and most other commercial resistor systems.

COMPOSITION PROPERTIES

Viscosity: 180 ± 30 Kcps, when measured with Brookfield HBT, Spindle #14, utility cup, 10 RPM, 25°C.

Solids: 64.00 <u>+</u> 3.00 %

Recommended Thinner: KOARTAN A-1039

RECOMMENDED PROCESSING PROCEDURE

Printing: Printing with 250 mesh stainless steel screen using 10-15 μ m emulsion and 45 degree angle is recommended. Other mesh counts, 200-325, and emulsion thicknesses, 5-25 μ m, may be used for special applications.

Coverage is approximately 130 cm² per layer, when utilizing 250 mesh screen and a wet print thickness of about 35 µm.

Drying: Wet prints should be allowed to level for 5-10 minutes prior to drying. Dry for 10-15 minutes in a convection oven or belt dryer at 125°C-150°C.

Firing: Firing in air using a belt furnace and a 28-40 minute profile, with 5-8 minutes at a peak temperature of 580°C-600°C, is recommended. Air flow rates must be optimized to ensure that the products of binder burn-off discharge properly and create a fully oxidizing atmosphere in the muffle.

650 600 550 500 450 400 350 300 250 200 150 0 10 20 30 40 ENTRANCE EXIT Storage and Shelf Life: Store in tightly capped containers at room temperature. Shelf life is 6 months for unopened jars. Thorough mixing of the paste before each use is recommended. Under ordinary conditions of storage and use the product should not require thinning. However, solvent loss during extended printing runs may be replaced by incorporating up to 0.5% of Koartan A-1039 thinner.

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