

Technical Information

5650 Resistor Overglaze

The 5650 overglaze is suitable for the protection resistor chips, networks, and hybrid circuits. Its low firing temperature results in relatively minor shifts in the value of most resistors. Its green color absorbs laser energy and results in fast trimming speeds. The 5650 can be used for the protection of thick film capacitors and ferrite core inductors, if a low CTE buffer layer is

printed first. The 5650 composition does not contain cadmium or highly toxic organic solvents. Key features include:

- Fast Laser Trimming
- Excellent hermeticity.
- Compatibility with most resistor systems.

TYPICAL FIRED FILM CHARACTERISTICS

COLOR	GREEN
FIRING TEMPERATURE	500°C - 525°C
SURFACE FINISH	Shinny

COMPOSITION PROPERTIES

VISCOSITY:	130 ± 30 Kcps, when measured with Brookfield HBT, Spindle #14, utility cup, 10 rpm, 25 C.
SPECIFIC GRAVITY:	1.8-2.4 g/cm ³
RECOMMENDED THINNER:	KOARTAN A-1039

RECOMMENDED PROCESSING PROCEDURE

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

Coverage is approximately 130 cm^2 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 22-40 minute profile, with 10 minutes at a peak temperature of 500°C-510°C or 3 minutes at a peak temperature of 525°C-530°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.

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.