



DUPONT 5421E

PLATABLE TERMINATION FOR CHIP RESISTORS APPLICATIONS

PRODUCT DESCRIPTION

Specially developed for chip resistors applications, DuPont 5421E is a platable Leadfree*, Cadmium-free* silver/palladium C1 termination that meets the needs of low cost, high performance and green product.

PRODUCT BENEFITS

- Lead free*
- Cadmium free*
- High acid resistance
- Dense fired film
- Platable
- Fast firing, 850°C/30min profile
- Cost effective, 0.5% palladium content
- Compatible with DuPont 00X0srs resistors

*Cadmium and lead “free” as used herein means that these are not intentionally added to the referenced product. Trace amounts however may be present.

PROCESSING

Substrates

Properties are based on test using 96% alumina substrates. Substrates of other compositions and from various manufacturers may result in variations in performance properties.

Printing

Properties are based on DuPont 5421E printed to 18±2 µm dried thickness using 325 mesh stainless steel screen with an emulsion thickness of approximately 15µm.

Drying

Allow the wet print to level for 10-15 minutes at room temperature. Dry for 15 minutes at 150°C.

Firing

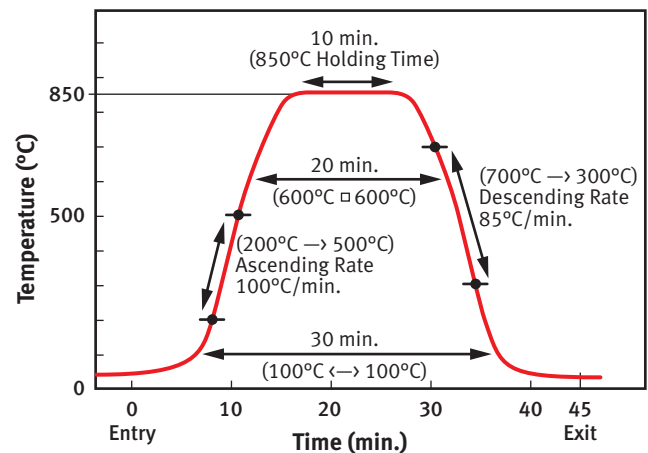
Dried prints should be fired in a belt furnace. Use a 30-minutes cycle with a peak temperature of 850°C x 10 minutes.

Table 1-Typical Fired Properties

Test	Properties
F.O.G – 4th scratch	≤20µm
F.O.G – 50% point	≤10µm
Viscosity (Pa.s) [Brookfield HBT, #14 spindle, UC&S @10 rpm, 25°C]	210 – 260
Solids (750°C) [%]	75.6 – 77.6
Resistivity @ 12µm (mΩ/sq)	≤10
Adhesion (N)	≥18
Thinner	4553

This table shows anticipated typical physical properties for DuPont 5421E based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

DuPont Standard Profile 850°C x 10 min., 30 min.) (DuPont QA Profile)





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STORAGE

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25°C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

SAFETY AND HANDLING

For Safety and Handling information pertaining to this product, read the Material Safety Data Sheet (MSDS).

FOR MORE INFORMATION ON DUPONT 5421E OR OTHER DUPONT MICROCIRCUIT MATERIALS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:

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CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102-5 K-28748 (11/14)