DUPONT™ PE621

ULTRA-LOW TEMPERATURE CURE CARBON

PRODUCT DESCRIPTION

DuPont™ PE621 is a very low temperature drying carbon paste. PE621 has been designed to maintain low temperature substrate tolerances as this composition can be processed between 60°C-100°C. When dried using these low temperatures, PE621 has a unique ability to achieve very good physical and electrical properties in applications that don't require the high conductivity of a silver conductor.

PRODUCT BENEFITS

- Very low temperature drying process
- Best thermal cure achieved between 60–100°C
- Excellent adhesion to a variety of substrates

PROCESSING CONDITIONS

Substrates

Polycarbonate
PVC
Polyolefin
Acrylic
Polyester film
Polystyrene
PVDF

Screen Printing Equipment

Automatic reel-to-reel
Semi-automatic flat-bed

Screens

Stainless steel mesh - 325–230 wire/inch (SD 50/30-SD 75/36)
Polyester mesh - 90-40 to 61-64 thread/cm

DRYING

For best conductivity, dry at 60°C–100°C in a well-ventilated box/static oven for 10–20 minutes. Conveyorised/tunnel ovens tend to be more efficient and drying times will be shorter. Drying efficiency and print quality/thickness helps ensure the best electrical and physical performance.

Clean-Up Solvent

Triethyl Phosphate

Table 1. Composition Properties

Test	Properties
Solids (%) @ 150°C	38.5-42.0
Viscosity (Pa.s) [Brookfield 0.5 x RVT, #14 Spindle 10 RPM, 25°C]	120-150
Coverage (cm2/g/25µm)	150
Dried Print Thickness (µm)	8-12
Thinner	DuPont™ 8270

Table 2. Typical Physical Properties

Test	Properties
Sheet Resistivity (Ω/sq/25µm)	≤50
Abrasion Resistance (H) [ASTM pencil hardness]	≥H

Tables 1 and 2 show anticipated typical physical properties for DuPont™ PE621 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

STORAGE AND SHELF LIFE

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).

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FOR MORE INFORMATION ON DUPONT™ PE621 OR OTHER DUPONT MICROCIRCUIT MATERIALS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:

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