



# DUPONT™ PE828

## ULTRA-LOW TEMPERATURE CURE SILVER CONDUCTOR

### PRODUCT DESCRIPTION

DuPont™ PE828 is a very low temperature drying Silver Conductor. PE828 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, PE828 has a unique ability to achieve very good physical and electrical properties.

### PRODUCT BENEFITS

- Very low temperature drying process
- Best thermal cure achieved between 60–100°C
- Excellent adhesion to a variety of substrates
- Compatible/blendable with PE827 for desired resistivity

### PROCESSING

#### Screen Printing Equipment

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

#### Substrates

- Polycarbonate
- PVC
- Polyolefin
- Acrylic
- Polyester Film
- Polystyrene
- PVDF

#### 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 help insure best electrical and physical performance. Graph 1 shows a relationship between resistivity, time and temperature.

**Table 1-Typical Electrical & Physical Properties  
(Printed on Melinex® ST505 Polyester Film)**

Test	Properties
Sheet Resistivity (mOhms/sq/25 µm)	<25
Resistivity Δ% After Crease (ASTM F1683, 180°, 1 cycle, No Encap. 2 kg)	<15%
Abrasion Resistance (ASTM D3363 Pencil Hardness)	H
Adhesion (Tape Cross Hatch) (ASTM D3359 w/3M Scotch Tape 600)	No Transfer
Clean-up Solvent	Ethylene Diacetate
Dielectric	DuPont™ 5018

**Table 2-Typical Composition Properties  
(Printed on Melinex® ST505 Polyester Film)**

Test	Properties
Solids (%) @ 150°C	74–78
Viscosity (PaS) Brookfield RVT, #14 spindle, 10 rpm, 25°C	15–50
Density (g/cc)	2.5
Coverage (cm²/g @ 10 µm)	200
Dried Print Thickness (microns)	10–15
Thinner	DuPont™ 8265

This table shows anticipated typical physical properties for DuPont™ PE828 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.



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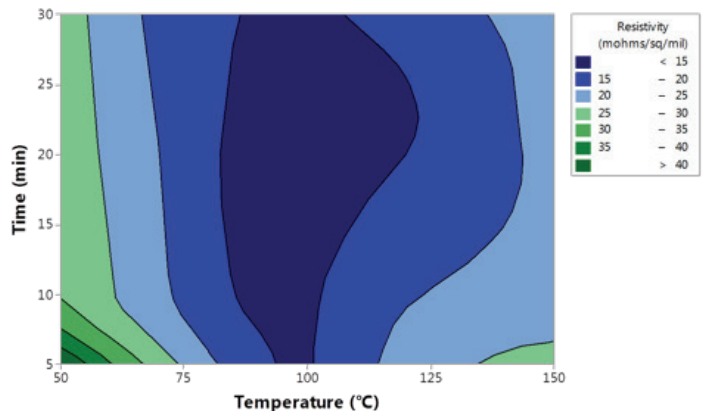
## STORAGE AND SHELF LIFE

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. Thinning is not recommended.

## SAFETY AND HANDLING

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

Graph 1 - PE828 Normalized Resistivity vs Time & Temperature



## FOR MORE INFORMATION ON DUPONT™ PE828 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-27803 (9/15)