



# DUPONT™ 5440

## CARBON CONDUCTIVE COMPOSITION

### PRODUCT DESCRIPTION

DuPont™ 5440 is a polymer-based, platable carbon paste printable on a variety of substrates. This composition usually will be applied over a fired-on silver that provides sulfur-proof layer for chip components.

### PRODUCT BENEFITS

- Excellent adhesion on both fired silver and alumina substrates
- Good platability
- Good printability

### PROCESSING

#### Substrates

96% alumina, glass

#### Printing

10 - 15µm cured thickness can be achieved using 200 mesh stainless steel screen with an emulsion thickness of 30 - 35µm.

#### Drying

Allow wet prints to level for 5 minutes at room temperature. Dry 10 minutes at 150°C in a well-ventilated oven, or belt dryer. Drying process can be skipped and directly cured depending on the application.

#### Curing

This composition is best cured at 200°C for 30 minutes. Variation in the curing temperature and/or time at the temperature may result in variation in the final properties.

#### Plating

Chips terminated with DuPont™ 5440 and processed as recommended can be electroplated in conventional processes.

**Table 1. Typical Composition Properties**

Test	Properties
Solids (150°C) (%)	50
Viscosity (Pa·s) [Brookfield RVT, #14 spindle, UC&S @10rpm, 25°C]	80 – 120
Thinner	9245

**Table 2. Typical Physical Properties Printed on Glass Substrate**

Test	Properties
Sheet Resistivity ( $\Omega$ /sq/mil)	800

Table 1 & 2 show anticipated typical properties for DuPont™ 5440 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

Shelf life is three months from date of shipment when refrigerated (0-5°C). Storage at room temperature is not recommended.

Materials should be allowed to equilibrate to room temperature before opening to prevent pick up of moisture from condensation.

After the containers are opened, use and storage conditions and the possible effects of contamination make shelf limits unpredictable.

### SAFETY AND HANDLING

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

**FOR MORE INFORMATION ON DUPONT™ 5440 OR OTHER DUPONT ADVANCED MATERIALS PRODUCTS, 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-29549 (3/19)