



# DUPONT™ 5463

## PLATABLE TERMINATION FOR CHIP RESISTOR APPLICATIONS

### PRODUCT DESCRIPTION

Specially developed for chip resistors applications, DuPont™ 5463 is a platable lead-free\*, cadmium-free\* pure silver C1 termination that meets the needs for a green, high performance and low cost application.

### PRODUCT BENEFITS

- Lead free\* and cadmium free\*
- Cost effective without containing palladium
- High yield at large volume manufacturing
- Compatible with 00X1Z(00X0) and 0FxxA resistor series
- Excellent TCR control on small chip sizes
- High acid resistance and platable
- Excellent solder leach resistance with lead-free solder

\*Lead and Cadmium 'free' as used herein means that lead and cadmium is not intentionally added to the referenced product. Trace amounts however may be present.

### PROCESSING

#### Substrates

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

#### Printing

Properties are based on 5463 printed to  $13 \pm 2 \mu\text{m}$  dried thickness using 325 mesh stainless steel screen with an emulsion thickness of approximately  $10 \mu\text{m}$ .

#### Drying

Allow wet prints to level for 5-10 minutes at room temperature. Dry 10-15 minutes at  $150^\circ\text{C}$ .

#### Firing

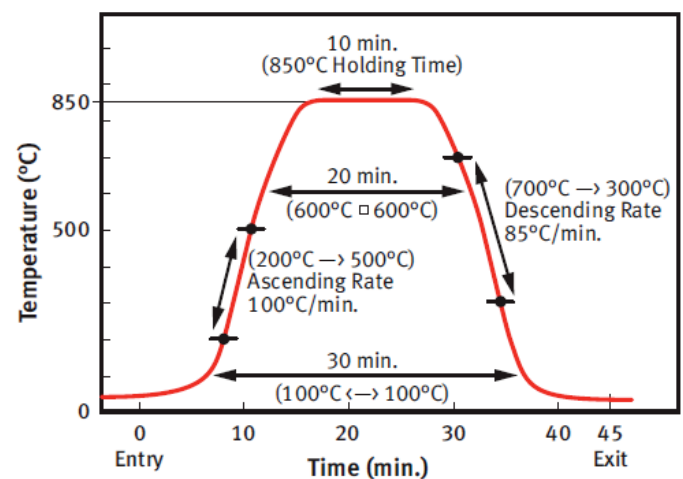
Dried prints should be fired in a belt furnace. Use a 30-minutes cycle with a peak temperature of  $850^\circ\text{C}$  x 10 minutes.

### Typical Fired Properties

Test	Properties
F.O.G – 4th scratch	$\leq 20 \mu\text{m}$
F.O.G – 50% point	$\leq 10 \mu\text{m}$
Viscosity (Pa.s) [Brookfield HBT, #14 spindle, UC&S @10rpm, $25^\circ\text{C}$ ]	250 – 320
Solids ( $750^\circ\text{C}$ ) [%]	72 – 74
Resistivity @ $10 \mu\text{m}$ ( $\text{m}\Omega/\text{sq}$ )	$\leq 8$
Thinner	4553

This table shows anticipated typical physical properties for DuPont™ 5463 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 $850^\circ\text{C}$ x 10 min., 30 min.) (DuPont QA Profile)



### STORAGE AND SHELF LIFE

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature ( $< 25^\circ\text{C}$ ). 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.



## **DUPONT™ 5463**

### **PLATABLE TERMINATION FOR CHIP RESISTOR APPLICATIONS**

#### **SAFETY AND HANDLING**

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

**FOR MORE INFORMATION ON DUPONT™ 5463 OR OTHER DUPONT 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.

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