



# DUPONT™ 6690/6691

## THICK FILM COMPOSITION

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DuPont™ 6690/6691 is provided for use in the production of electrically heated backlights by the “direct” method. The pastes can be blended with each other to obtain a wide range of electrical resistance.

### PRODUCT BENEFITS

- Lead free and Cadmium free
- Acetic acid resistance
- Wide range of electrical resistance
- Robust printing performance
- High firing density
- Supplied ready to print

### PROCESSING

#### Blending

In order to obtain a specific resistance value, the pastes can be blended with each other. A computer program or semi-logarithmic graphs can be used to determine blend recipes for specific heated window designs.

#### Printing

Mix thoroughly before printing. Use air dried and some UV enamel if necessary.

#### Drying

Dry at 150°C.

#### Firing

Dried print should be fired in a belt furnace with solvent and sulfur-free air atmosphere. Average glass surface temperature over glass should be 600 – 700°C, while over enamel 600 – 670°C.

#### Soldering

Burnish with steel wool or fired glass. Use type R rosin flux and Copper clip or Braid preferred pre-tinned.

### Typical Fired Properties

Test	Properties	
	6690	6691
Resistivity after firing (mΩ/sq/10μm)	3.5	4.7
Adhesion, N	> 250	> 250
Solder Recommended 250 – 350°C/5sec 320 – 400°C/5sec	60Pb/27Sn/3Ag/10Bi 70Pb/27Sn/3Ag Other Pb-free solder	
Air side Color	Yellow	
Tin side Color	Dark Brown	

### Composition Properties

Test	Properties	
	6690	6691
Viscosity (dPa.s) RION #2	250 – 300	400 - 500
Solids (750°C) (%)	80.3 – 82.8	80.3 – 82.8
Thinner	7046/8250	

Above tables shows anticipated typical physical properties and composition properties for DuPont™ 6690/6691 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).



## DUPONT™ 6690/6691 THICK FILM COMPOSITION

**FOR MORE INFORMATION ON DUPONT™ 6690/6691 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-29536 (6/17)