DUPONT™ 5780R

GOLD BONDABLE AU CONDUCTOR

PRODUCT DESCRIPTION

DuPont™ 5780R is a very high density gold conductor composition. Suitable for applications requiring high frequency and/or fine line conductor features.

PRODUCT BENEFITS

- Lead, Phthalate and Cadmium free*
- Excellent for fine line features
- Excellent wire bond acceptance yields with 1&2 mil Au wire
- Dense fired film
- Smooth surface appearance
- REACH and RoHs compliant
- Compatible with DuPont Pb-free Resistor Series and Dielectric QM44

*Lead, Phthalate and Cadmium "free" as used herein means that lead, phthalate and cadmium and are not intentional ingredients in and are 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 variations in performance properties.

Screen Printing Recommendation

A 325 or 400-mesh stainless steel screen with a 12.5µm (0.5mil) emulsion thickness is recommended. Printing speeds up to 15 cm/s (6 in/s) can be used.

Drying

Allow the wet print to level for 10-15 minutes at room temperature. Dry for 15 minutes at 150°C.

Firing

Dried prints should be fired in a belt furnace. Use a 30-minute cycle with a peak temperature of 850°C for 10 minutes. No significant changes in performance characteristics were seen after multiple refires at 850°C.

Table 1 - Typical Fired Properties

Test	Results
Line Resolution (lines/spaces)	150/100 µm [6/4mil]
Fired Thickness	5 - 9 µm
Resistivity	</=5.0mohm/[]
Gold Wire Bonding[1]	1 mil Au wire >8g 2 mil Au wire >35g 1 mil no misses in 1600 trials 1 mil Au on QM44 wire >8g

[1]Printed on Alumina

[2]400 Mesh stainless steel screen used

Table 2 - Composition Properties

Test	Results
Viscosity (Pa.s) (Brookfield HBT, SC04 14/6R [UC&SP], 10 RPM, 25°C)	300 - 450
Solids (750°C) [%]	87 - 89
Coverage, cm^2/g	60 - 90
Thinner	DuPont™ 8250

Tables 1 and 2 show anticipated typical physical properties for DuPont™ 5780R 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™ 5780R OR OTHER DUPONT MICROCIRCUIT MATERIALS, PLEASE CONTACT YOUR LOCAL REPRESENTATIVE:

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K-28889 (5/15)