



TECHNICAL DATA SHEET

ELECTRA^WD'ORTM

ED9000 SERIES

CARBON RESISTOR PASTES
FOR FLEXIBLE CIRCUITS AND
MEMBRANE SWITCHES

PRODUCT DESCRIPTION

ED9000 FLEXIBLE RESISTOR PASTES are manufactured using high quality carbon and graphite powders to give a wide range of values. They are designed for producing fixed-value (discrete) resistors and are used in both commercial and automotive applications. They are suitable for use on polyester, polyimide, polycarbonate or ABS substrates, particularly in applications where stability must be achieved in conjunction with minimum cure temperature.

FEATURES & ADVANTAGES:

- **Tailor made values.** **ED9000** can be made to specific resistance values required by the customer.
- **Large resistance range.** **ED9000** ranges from $100\Omega^{-1}$ to $1\text{ Meg}\Omega^{-1}$ in resistance. All can be processed under the same conditions allowing many values to be printed, dried and then cured together, placing less thermal stress on the substrate.

Resistance: Under certain circumstances, if artwork and sample substrate is supplied, Electra's laboratory will formulate the resistance value for a particular set-up/design.
All Electra resistance values are those achieved on FR4 substrate when printing with a 200 mesh stainless steel screen.

PROCESSING

Printing: Pastes should be printed using a 55 to 77T polyester mesh. For applications requiring fine print definition or tight resistance tolerances it is advantageous to use a 200 mesh stainless steel screen as this will reduce distortion.

Drying: Resistor pastes can be dried for 10 mins at 80 to 100°C, allowing the printing of several values, all of which can be final cured in one process.

Curing: 30 minutes at 100°C.



Important: IR curing is the most efficient method of curing carbon inks, however resistance values and cure speeds will be dependent on IR wavelength and intensity, please contact Electra technical service department for recommendations.

VISCOSITY ADJUSTMENT:

If thinning becomes necessary due to evaporation loss after prolonged usage, then **ER1 or butyrolactone** should be used up to a maximum of 5% (by weight).

CLEANING:

After printing the screen and stencil should be cleaned of residual paste using Universal Screenwash **SW100** or **Butyrolactone**.

SHELF-LIFE:

Minimum 6 months at room temperature. Refrigeration is not necessary.

PERFORMANCE PROPERTIES

Resistivity: $100\Omega^{-1}$ to $1\text{Meg}\Omega^{-1}$

Adhesion: X-hatch and tape-test:100% adhesion on polyester, polyimide, polycarbonate and ABS.

Hardness: 2H

Termination. ED3000 flexible silver paste is recommended.



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