

Passive Component Materials

7082 Carbon Conductor

Polymer Thick Film Composition

All values reported here are results of experiments in our laboratories intended to illustrate product performance potential with a given experimental design. They are not intended to represent the product's specifications.

Product Description

Carbon conductor 7082 may be used as a polymer thick film resistor. It can also function as a conductor in designs that tolerate high resistivity. Its major benefits include low cost and excellent screen life. It can be used with semiautomatic and manual printers. Carbon conductor 7082 has been designed for applications requiring small resistance changes.

Processing

- **Screen Printing Equipment**
Semiautomatic or manual
- **Screen Types**
Polyester, stainless steel
- **Typical Cure Conditions**
Box Oven: 120°C for 10 minutes
- **Typical Circuit Line Thickness Printed with 325-mesh stainless steel screen**
7 - 14 microns
- **Clean-up Solvent**
Ethylene glycol diacetate

Storage and Shelf Life

DuPont thick film polymeric compositions should be stored at ambient temperatures. The shelf life of material in unopened containers is a minimum of six months from ship date. Some settling of solids may occur, so compositions should be stirred thoroughly prior to use.

Table 1 Typical Physical Properties on 5-mil Polyester Film	
Sheet Resistivity (kΩ/sq/0.4 mil) or (ohm/sq/mil)	1.0
Adhesion/Tape Pull (3M Scotch Tape #810)	400
Abrasion Resistance, Pencil Hardness (ASTM D3363-74) (H)	No material transfer
Solderability	>2 Not recommended

Table 2 Composition Properties	
Viscosity (Pa•s) (Brookfield HBTD, 5 rpm, #14 spindle, 25°C)	210 - 260
Thinner	Dipropylene glycol monomethyl ether

Safety and Handling

This product contains organic solvent and materials. The following precautions should be exercised when handling carbon conductor 7082:

- Use with adequate ventilation.
- Avoid prolonged contact with skin. If contact with skin occurs wash affected area immediately with soap and water.
- Avoid prolonged breathing of vapor.
- If contact with skin occurs, wash affected area immediately with soap and water.
- Dangerous if swallowed - DO NOT CONSUME.
- Refer to MSDS for more details.

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