CONDUCTIVE ELECTRODE MATERIAL

SILVER BASED CONDUCTOR DESIGNED FOR USE WITH THE D-4150 SERIES AND D-4200-C SERIES OF DIELECTRICS

9916

ESL 9916 is a silver based conductor specially developed for use as an electrode with D-4150 Series and D-4200-C Series of dielectrics. ESL 9916 may also be used with the 4100 Series of dielectrics. When used with ESL D-4150 Series and D-4200-C Series dielectrics, this conductor provides the optimum performance of the systems. The typical properties of these conductors were derived from printing and firing directly on alumina.

PASTE DATA

RHEOLOGY: Thixotropic, screen printable paste

VISCOITY:
(Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C) 200±25 Pa-s

SHELF LIFE: (25°C) 6 months

PROCESSING

SCREEN MESH/EMULSION: 325/25 µm

LEVELING TIME: (25°C) 5-10 minutes

DRYING AT 125°C: 10-15 minutes

FIRING TEMPERATURE RANGE: 850°C-900°C

OPTIMUM: 900°C

TIME AT PEAK: 10 minutes

RATE OF ASCENT/DESCENT: 60°C-100°C/minute

SUBSTRATE OF CALIBRATION: 96% alumina

THINNER: ESL 401 or 413

9916 9903-New
**TYPICAL PROPERTIES**

**FIRED THICKNESS:** 12.5±2.5 µm

**PRINTING RESOLUTION:**
(Line/Space) 125 µm/125 µm

**RESISTIVITY:** ≤ 2.0 mΩ/sq.

**SOLDER LEACH:**
(No. of 10 sec. dips to double resistance of 0.25 mm wide x 100 mm long conductor, 62 Sn/36 Pb/2 Ag, 220°C±5°C) ≥ 7

**ADHESION:**
(90° pull, 2.0 mm x 2.0 mm pads, 62 Sn/36 Pb/2 Ag, 220°C±5°C)

- **Initial pull strength:** ≥ 80 N
- **Aged 48 hours at 150°C:** ≥ 65 N