Product Information Sheet

# ElectroSperse D-120

## Low-Temperature Electrode Paste

**ElectroSperse™ D-120** is a developmental silver electrode paste, designed specifically for firing at low temperatures.

| Typical Properties | |
|---|---|
| Resistivity (mΩ/sq @ 1 mil)[1] | <3 |
| Fired Thickness (µm)[2] | 12-17 |
| Viscosity (kcps)[3] | 80±30 |
| Peak Firing Temp (°C)[4] | 360-420 |
| Time at Peak (min) | 5-30 |
| Adhesion[5] | Pass |

(1) Resistivity dependent on peak firing temperature.
(2) Wet thickness 46-49 µm.
(3) Measured with Brookfield R/S Rheometer @ 9.6 $s^{-1}$, 25°C.
(4) Air dried 3-4 minutes and 120°C for 10-15 minutes before firing.
(5) Scotch tape adhesion test on F-doped Tin Oxide coated glass.

### Processing Recommendations

**Application:** Screen printing
**Screen Type:** 325 mesh stainless steel
**Typical Line Resolution:** 75-125 µm (3-5 mils); no line spreading upon drying. Finer resolution is achieved under select conditions.
**Paste Storage & Shelf Life:** The paste should be stored in tightly capped containers, in a cool, dry place away from direct sunlight. Properly stored material will have a shelf life in excess of 6 months. Samples should be thoroughly mixed prior to use.
**Thinning:** Thinning is not recommended since the paste is supplied at the correct viscosity for application. Thinning may become necessary to replace solvent lost by evaporation. Contact Five Star for appropriate solvent choices.

### Applications

**ElectroSperse D-120** is suitable for use in metallization of rigid substrates where firing temperatures less than 400ºC are required. Typical applications include interconnects, linearization patterns for touch screen sensors, display electrodes, heater electrodes and antenna.

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