

33-145 Silver Conductor

33-145 is a mixed bonded, silver conductor paste especially designed to be used on AlN substrates for the production of high adhesion; high conductivity interconnects in the production of power hybrid circuitry. The material features good re-fire stability and excellent solderability and leach resistance.

Processing Recommendations

Printing: 325 mesh screens with 1 mil emulsion thickness should be used.

Drying: Drying should be accomplished in air circulating ovens at 90°C - 110°C for 10 to 15 minutes.

Firing:

Peak Temperature	850°C
Time at Peak Temperature	10 Minutes
Total Profile Time	30 to 60 Minutes

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.

Typical Properties	
Print Thickness:	
Dry:	20-28µm
Fired:	10-14µm
Line Definition (microns):	125µm
Resistivity ¹ (mΩ/sq.):	1.0-1.7
Solderability ² :	3-5
Leach Resistance ³ :	20 x 1 second dips
Adhesion ⁴ (lb.):	6-14 lbs.
Aged (150°C/48 hrs.):	1.7-5.9 lbs.

Notes:

- ¹ Normalized to 1 mil fired thickness.
- ² Seconds to reach > 95% coverage, Sn62, 230°C.
- ³ Seconds to reach < 80% coverage, Sn62, 215°C.
- ⁴ 90° wire peel test, 80 mil x 80 mil pad.

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