

1210 Silver Conductive Via Plugging Material

Product Description

1210 Silver Conductive Via Plugging Material provides low cost blind and buried vias with or without through hole plating, where the core boards are fully planar and thus more reliable. This is a 100% solids system with no shrinkage on curing that provides a high density via plug. PCB's can now be designed to recapture much of the real estate that is currently lost to plated through holes and land patterns. In order to utilize this material a cost effective and simple application process can be implemented. Another benefit is a 30% reduction in the total number of production processes required to manufacture sequentially built up boards.

Features

- Significant reduction in the amount of processing steps required to manufacture sequentially built up boards by eliminating many of the expensive plating and lamination steps.
- 100% solids system with virtually no shrinkage on curing.
- Compatible with conventional copper plating techniques.
- Excellent thermal and electrical conductivity.
- Provides a flush surface to reduce the amount of copper plating required in sequential build up.

Ink Properties

Glass Transition (Tg):	120°C
Coefficient of Temperature Expansion (CTE):	40 ppm/°C from -50° to +120°
Thermal Conductivity:	2W/M°K
Volume Resistivity:	Less than 1μΩ-m at 25°C
Sheet Resistivity:	< 100 milli Ω/□/25μ
Shelf Life:	30 days at room temperature or 3 months at -10°C
Adhesion, Tape Test:	No material transfer
Plateability:	Compatible with conventional copper plating techniques

Change in physical and electrical properties after temperature cycling:

Passes. No electrical failures

Viscosity:

3,000,000 cps at 0.3 rpm with a Brookfield model LVT with a number LV5 spindle at 25°C

Specific Gravity:

4 grams/cc



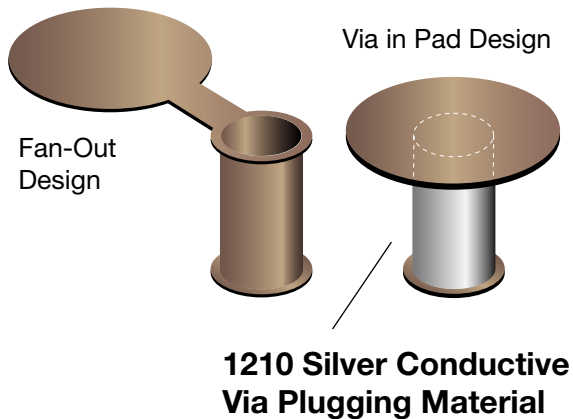
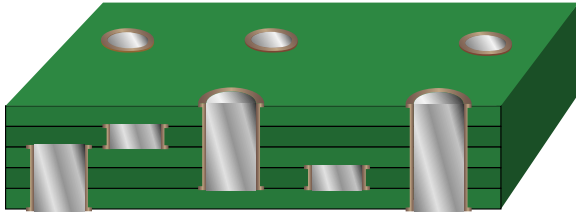
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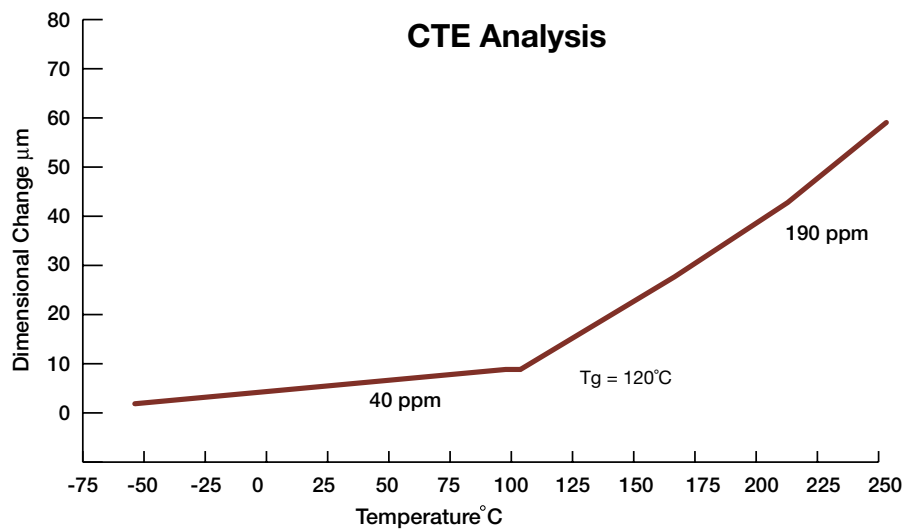
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1210 Silver Conductive Blind, Buried and Through Hole Via Plugging Ink



Processing

- Ordinary stencil printing equipment can be used to apply the 1210 Conductive Material into the via holes.
- Recommended stencil: 4 to 5 mils thick stainless steel. The hole opening in the stencil needs to be 4 to 6 mils larger than the hole diameter in the circuit board.
- An 80 to 90 durometer (hard) squeegee is recommended. This will minimize the tendency of the squeegee to scoop out the material from the via hole in the printing operation.
- Use a squeegee speed of about 2 inches per second. Two of these passes of the squeegee will be needed for each 0.010" of board thickness.
- Via aspect ratios of up to 6:1 (hole depth: hole diameter) have been successfully filled. Printing in both directions is recommended if possible.
- Recommended curing is 45 minutes at 155°C.
- Clean up solvents are acetone, alcohol, toluene or mixtures.



Information presented in this product data sheet is considered reliable but conditions and methods of use, which are beyond our control, may modify results. The technical information contained herein outlines the typical properties of this material and should not be used in the preparation of specifications as it is intended for reference only.