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THERMALLY CURABLE HOLE PLUGGING INK

(1-COMPONENET TYPE)

THP-100 Z2

(UL Suffix: THP-100Z1)

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1. Features

THP-100 Z2 is a fully epoxy-based, one-component and thermal curable permanent hole plugging ink. This product features an extra low shrinkage after curing, suitable for plugging through-holes of thick panel. Electroless Cu plating can be processed over the plugged via holes for free pattern designing.

2. Characteristics

Product Name	THP-100 Z2
Color	White
Viscosity	350 +/- 50dPa･s (E-type viscometer 5rpm / 25℃)
Standard cure condition	150℃ 15-30min. (Hot air convection oven)
Shelf life *	6 month after production (Stored at dark place, 10℃ or below)

* Provisional value, not final.

3. Process

Package Opening	Wait until the package becomes ambient temperature.
Stirring	*20min. by hand or butterfly mixer at low rpm avoiding bubble trapping inside (desirable to use vacuum mixer).
Panal	Must be panel-plating is completed.
Pre-treatment	Remove the oxidization of copper surface.
Printing	#100-mesh Tetron screen (#80-200) Recommend to use Special squeeze.
Post cure	150deg.C℃ 15-30min (Hot air convection oven)
Surface scrubbing	#320 buff for hole plugging ink (#220-320)

4. Attention

* Hole plugging process must be done after panel plating. Patterning (Circuitization) follows hole plugging.
* Workshop is desirable to be a clean room and ambient temperature should be kept 20-25deg.C, 50-60%RH.
* Open a can after the ink becomes room temperature, stir ink well before use.
* Post cure condition should be fixed by your own confirmation tests. Over cure or sufficient cure may cause the deterioration of final properties.
* Set cure conditions after testing because they are influenced according to the type of your oven, quantity of the panels you put in the oven and so on. Insufficient and/or over curing conditions may deteriorate end properties.
* Screen can be cleaned with ether or ester solvent.

5. End Properties

Test item	Test method	Result
Adhesion	Taiyo internal method Cross hatch taping	100 / 100
Pencil hardness	Taiyo internal method No scratch on the copper	>6H
Heat resistance	After plugging T/H, coated the surface with solder resist. Check blistering of solder resist. 260℃ 20sec× 2cycles of flow solder dipping using rosin type flux.	Pass
Water absorption	Pure water dipping 23℃ /24h Paste thickenss:100um	0.7%
Tg CTE	TMA tensile method (X, Y direction) Tg α1/α2	 155dg.C 41/110ppm

A. All chemicals in general may have unknown harmful effects. Your highest caution and care is required for handling. For the detail, refer to SDS.
B. No intentional usage of restricted substances in EU RoHS to this product and its production process; Namely Cadmium, Lead, Mercury, Hexavalent Chromium, PBB and PBDE, Phthalic esters(DEHP, DBP , BBP, DIBP).