Technical Data Sheet

Oct. 2015

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Thermally Curable, 1-Component, Permanent Hole-Plugging Ink

THP-100 Z2

1. FEATURES :

THP-100 Z2 is 1-component, thermally curable, permanent hole-plugging ink with following features;

- Shorter cure time
- Better printing ability
- Long shelf life

2. CHARACTERISTICS :

Product name	THP-100 Z2
UL name	THP-100 Z1
Color	White
Viscosity	350±50dPa・s (Cone plate type Viscometer, 5min^{-1} / 25deg.C)
Standard curing condition	150deg.C 15min. (Hot air convection oven)

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3. PROCESS CONDITION

PROCESS		RANGE
Package opening	Ink temperature equals to the room temperature	
Stirring	Debubbling mixer 20 minute (Recommendation; orbital-planetary vacuum mixer, 10 min).	10 - 30min
Board	PTH board after panel plating	
Pretreatment	Acid treatment (Remove the oxidation of copper)	
Printing	100 mesh-count, Tetron screen or Metal mask Note: Usage of a special shaped squeegee is recommended.	80 – 120mesh
Precure	150deg.C 15min. (Hot air convection oven)	150deg.C/15min over
Scrubbing	#320 buff scrubbing or Ceramic buff scrubbing or Belt sanding	#320-600

4. ATTENTION ON EACH PROCESS:

Recommendable workshop condition

- Hole plugging should be onto the board with panel plated surface.
  Circuit imaging should be conducted after the above hole-plugging process.
- Recommended operation environment is a clean room of 20 to 25 °C temperature and 50 to 60%RH.
- First let the temperature of the ink to reach the room temperature, then open the can and stir sufficiently before use.
- Post-cure condition should be fixed by your own confirmation tests. Over cure or insufficient cure may cause the deterioration of final properties.
- Curing condition depends on the type of the curing oven, the number of boards entered into it, and board thickness and other parameters. Verification test should be conducted to define the operating conditions. Insufficient curing will lower the end properties.
- Screen can be cleaned with ether-based or ester-based solvent cleaners.

5. HANDLING ISTRUCTIONS OF THIS CHEMICAL

All kind of chemicals should be handles with extreme care, since any chemicals can have unknown harmfulness. Prior to use material, you should refer to the relates material safety data sheet(SDS) and usage instruction manual for the necessary instructions for handling this material.

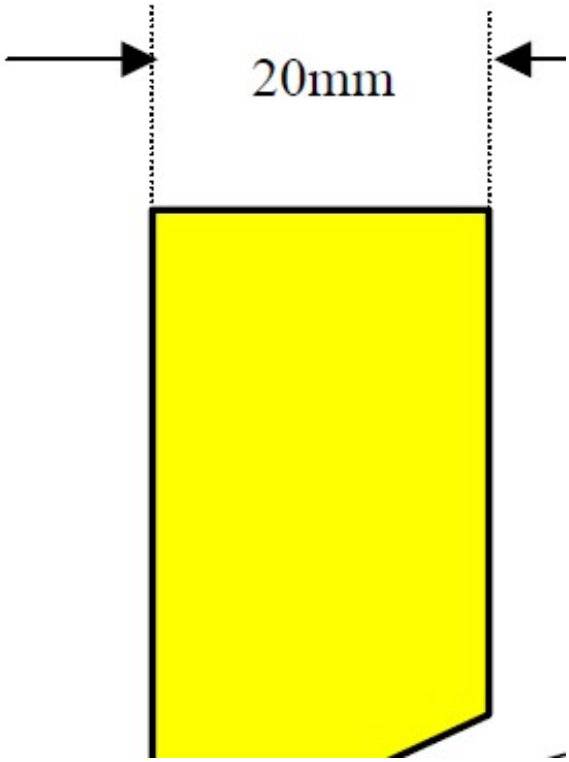
No intentional use of RoHS subjected 6 substances (Lead, Cadmium, Mercury, Hexavalent chromium, PBBs and PBDEs) for this product.

6. END PROPERTIES

Test Items	Test Condition	Results
Adhesion	Taiyo internal method Cross hatch taping	100/100
Pencil hardness	Taiyo internal method (No scratch on the copper)	＞6H
TG	TMA method (X,Y-axis) JIS-C-6481	155deg.C
CTE	Below Tg(X-Y direction) Above Tg(X-Y direction)	42ppm 110ppm
Water absorption	Measured after dipping in de-ionized water, 23deg.C, 24 hours	0.7 %
Solder heat resistance	Confirm blistering for solder resist coated after hole plugging process (Rosin flux 260deg.C, 20sec X 2times, Solder Dip test)	Pass

- The contents of this technical datasheet are based on the results of our extensive experiments and only for reference, not to guarantee the same in your process.

7. SPECIAL SQUEEZE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