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**X-87\***

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## **THERMAL DRYING ETCHING INK**

**X-87\***

## 1. FEATURE

X-87\* is a single-component, Thermal drying etching resist is excellent printability .

- a) Excellent printability

## 2. SPECIFICATION

Color	Black
Viscosity	160dPa.s (Cone plate model viscometer 5min <sup>-1</sup> / 25deg.C)
Specific gravity	1.2
Standard drying condition	60deg.C / 10-20min. (Hot air convection oven) Or 100deg.C/3-7min
Shelf life	6 months after manufacturing (stored below 20deg/C)

## 3. PROCESS

Process	Condition	Tolerance window
Laminate	FR-4 T= 1.6mm	
Surface preparation	Acid treatment → Buff scrubbing (#600 + #1000)	
Printing	#300 mesh Tetron screen	[225 - 300mesh]
Postcure	100deg.C / 4min. (Hot air convection oven)	[100deg.C, 3 - 7min.]

## 4. ATTENTIONS in your process

- \* Recommendable workshop condition: Operation in a clean room of ambient temperature at 20 – 25deg.C / 50 - 60% RH
- \* Open up the package when becoming ambient temperature. Stir well before use.
- \* The adequate thickness is 12-15um (on the copper after curing).
- \* As drying condition and window are variable depending on the type of drying oven, the board quantity to input, etc., set it suitable to your process after testing. Both shortage and excess in curing may degrade the properties of coating film.
- \* Printing screen is washable with ester-based solvent such as Diethylene glycol monoethyl ether acetate and others.
- \* Avoid dilution as much as possible. In case of dilution due to high viscosity, use “Reducer B”. As too much dilution affects the coating properties, please keep the quantity of solvent under 2wt%.

**5. PROPERTIES**

ITEM	TEST METHOD	TEST RESULT
ADHESION	Taiyo Internal Method Tape peeling after cross cut	100 / 100
ETCHING RESISTANCE	Cupric-Chloride 200g / litre HCl 150g / l 50°C/20 min . Immersion method	Pass
STRIPPING	3 wt% NaOH, 40°C Immersion method	15 sec.

\* All test data mentioned above in this technical data sheet are based on our laboratory test results and only for reference, not to guarantee the same in your process.

**6. Attention**

- 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).