

UV-curing Etching Resist Ink For Acidic Etching Solution

(KSM-UV201Series)

1. Features

KSM-UV201 series is UV curing etching resist ink for acidic etching solution, which is used for making patterns on copper-clad-laminates by mesas of acidic etching. The cured film can provide good adhesion, clear printing line, high resolution, resistance to the etching of acidic $\text{CuCl}_2/\text{FeCl}_3$ solution and fast removing coating.

1.1 Properties of Ink

Items	Features	Notes
Product Type	KSM-UV201	
Color	Blue	
Fineness	$\leq 10\mu\text{m}$	0~25 μm Fineness gauge
Mesh selection	100 ~ 140T	
Viscosity (25℃)	200±30dPa·s	VT-04F
Density(25℃)	1.10~1.30g/ml	
Curing energy	800~1200mJ/cm ²	The effective value through the polyester film
Package	5.0kg/Barrel 10kg/Box	Can be adjusted according to customer requirements
Shelf time	6 months since the date of manufacture	Store below 25℃ in the dark

2. Process

Please control and maintain the following operating conditions , it will affect the quality and reduce lead trustworthiness when the operating conditions were changed .

2.1 Process Parameters

- (1) Mixing : Before use, should stir 15 to 20 minutes ;
- (2) Pre-treatment : chemical treatment combined with mechanical polishing to ensure the

surface of the active substance has no effect of residual ink adhesion ;

(3) Mesh selection : 100 ~ 140T;

(4) Curing : 800 ~ 1200mJ / cm² (high pressure mercury lamp or metal Halogen lamp).

2.2 Process Considerations

(1) Keep the work environment clean and keep the board no dust contamination or residual impurities ;

(2) Plate surface contamination will lead to lower quality and trustworthiness of ink ;

(3) Operation should be carried out in a clean environment , clean room temperature 20 ~ 25 °C, relative humidity of 50 to 60% ;

(4) Avoid UV light and sunlight irradiation straight , the ideal operation should be carried out in yellow light ;

(5) Cans after the ink used in the recovery operation ambient temperature , stir before use ;

(6) The thickness of the cured ink (10 ~ 12μm) is appropriate , too thicker will affect the ink adhesion , chemical resistance and pencil hardness ;

(7) Curing conditions because of different UV lamps and equipment vary. Please test after test set production conditions and scope . Curing conditions beyond the specified range will affect various properties of the ink

(8) Cleaning stencils, please apply ester solvent, after cleaning and drying can apply again.

3. Ink coating properties

3.1 Main features

Items	Features	Notes
Pencil hardness	≥2H	Pencil harder, JIS K5400 8.4
Adhesion	100/100	Laceration experiment, JIS K5400 8.5
Etching resistance	Line with/line distance 0.25/0.25mm	CuCl ₂ /FeCl ₃ acidic solution
Moving coating	3~5% NaOH solution, 20~40S	40~50°C

Attention :

1. Mixing the ink fully before using.
2. We will offer you special diluent or HEMA if the ink need dilute.
3. The values mentioned above are based on experiments in our lab. Experiments need to be carried out in order to get proper using condition in different conditions.

