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TAIYO INK MFG.CO.,(KOREA) LTD.

**HALOGEN-FREE
U.V CURABLE SOLDER RESIST**

UVR-150G HF10

2002. 12 Rev : 0

UVR-150G HF10

1. Characteristic

UVR-150G HF10 possesses the following excellent properties ;

- Halogen-Free
- Excellent adhesion.
- Excellent printing performance.
- Glossy type.
- Short curing time by U.V. radiation, most suitable for mass production.

2. General Specification

ITEM	SPEC.	REMARKS
Color	GREEN	T-C-006 Standard Visual Inspection
Viscosity	120±18Ps 150±15Ps	T-C-002 Standard Cone-plate Type / 25℃, 5rpm
Specific Gravity	1.3 - 1.5	T-C-005 Standard Pyknometer (Specific Gravity cup)
Pigment	0.7%	Compounding Ratio
Curability/ Solvent Resistance	GOOD	T-A-B009 Standard PGM-Ac, 20℃/30min. Scotch tape stripping
Pencil Hardness	4H	T-A-B013 Standard Above 4H / On the copper
Adhesion	100 / 100	T-A-B012 Standard Cross-Cut Tape Stripping Test
Solderability	3 TIME	T-A-B017 Standard Kester-922 Flux 260℃/10 sec × 3 cycles
Acid Resistance	Pass	T-A-B016 Standard 10 vol% H ₂ SO ₄ , 20℃/30 min. Scotch tape stripping

Alkali Resistance	Pass	T-A-B016 Standard 10 wt% NaOH, 20℃/30 min. Scotch tape stripping
Insulation Resistance	1.0×E12Ω	T-A-C001 Initial : 500V for 1min. at 25℃/60 %RH.
	1.0×E11Ω	T-A-C001 After : 40℃, 92%RH, 96hr, 500V for 1min
UL File No.	E147108	TAIYO (KOREA) UVR-150G
UL-94 Flame Rating	94V-0	
Halogen Content	< 500ppm	JPCA-ES-01-1999 < 900ppm
Shelf Life	6 MONTHS	Less than 20℃ (In Cool & Dark)

3. Process

A) Surface Preparation

Before printing such contamination like as Oil, Fat, Oxidation and other foreign matters remaining on the board surface must be removed completely. Because, these contamination shall cause a deterioration of adhesion property, after cured.

Careful pre-treatment for the board surface is necessary like follows ;

- Chemical ; An acid solution, such as “METALEX” (Nihon Oil, Fat Co.) or the equivalent.
- Mechanical ; Polishing with Brush Roller, “BRUSHLON” or the equivalent and water spray cleaning.
- Drying ; Heat & Hot air blower

B) Environmental Working Condition

- Air conditioning
- No direct Sun-shines
- Yellow lamps

C) Screen Printing

To use a screen material, polyester monofilament fabricated in a range of 250 - 300 Mesh-count / inch, is recommendable.

D) Curing

Conveyor speed (meter per 1 minute) will be varied, case by case, according to such condition as ;

The thickness of UVR-150 HF10 Coating, whether Thick or Thin, in order to better curing performance.

Type of U.V. Rays	Power	Number of lamps	Conveyor Speed
High Pressure Mercury Vapor Lamp	80W/cm	3 Lamps	4-6 m/min
	120W/cm	3 Lamps	5-7 m/min
Matal Halide Lamp	80W/cm	3 Lamps	5-6 m/min
	120W/cm	3 Lamps	6-8 m/min

E) Screen wash-up and Cleaning

Wash up with chemicals such as Cellosolve Acetate, Methyl Cellosolve, Dipropylene Glycol monomethyl Ether or Esterfic solvent.

4. Shelf Life

6 months from Date of Manufacture;

Date of Manufacture is appeared as Production

Lot number marked on each Labels ;.

Example ; 20021201201 .

Year	Month	Day	Classification	Lot No.
2002	12	01	2	01

5. Storage Condition

Store in cool and dark condition at less than 20℃.