

# Technical Data Sheet

MS-66770200-02

MS-00082200-01

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## Thermal Curable Type Solder Resist

### S-222F EM01 / HD-1

#### 1.Features

S-222F EM01/HD-1 is dual-component type thermal curable solder resist for FPC application with the following features.

- Excellent bendability
- Excellent solvent resistance
- Excellent hiding power

#### 2. General Specification

Product name	S-222F EM01 / HD-1
Mixing ratio	Main agent 1000 : Hardener 65 (wt%)
Color *	Black-matte
Viscosity *	230 (+/-50) dPa-s Cone-plate type viscometer, 5 min <sup>-1</sup> /25deg.C
Standard curing condition *	110deg.C/90min. (Hot air convection oven) 150deg.C/30min. (Hot air convection oven)
Pot life *	12 hours (at 25deg.C or below)
Shelf life *	12 months

\* after mixing

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FPTC-100TR67702/HD-1

## 3. Process

Range

Board: PET Substrate(PET:50um Cu:38um)  
Pretreatment: Acid rinse → Water rise  
Printing: 150mesh tetron screen 100-180mesh  
Post cure: Hot air convection oven 110deg.C/90min 110deg.C/60-120min

## 4. Process recommendations

- Recommended operation environment is a clean room of 20 to 25deg.C and 50 to 60%RH.
- Let the temperature of the ink to reach the room temperature.
- Stir well after adding hardener till you get homogeneous mixing.
- The adequate thickness is 10- 15um (on the copper after curing). Thin coating thickness may affect solvent resistance.
- Screen can be cleaned with ether-based or ester-based solvent cleaners.
- Curing condition depends on the type of the curing oven, batch size of work and other parameters. Find the optimum condition of your own. Insufficient curing shall degrade the end properties.

## 5. End properties

Test Items	Test Condition	Results
Adhesion	Cross cut test (Taiyo internal method)	100/100
Pencil hardness	Taiyo internal method (the hardness not reaching to copper foil surface)	H
Solvent resistance	Acetone rubbing test, 1kg x 20times. No changing on SR surface	Passed
Acid resistance	10 vol% HCl, 20deg.C / 20min. immersion and tape peeling	Passed

Test data in this data sheet is based on our laboratory test result and only reference, not to guarantee the same in your process.

## 6. Handling instructions of this chemical

Prior to use this material, you should refer to the related material safety datasheet (MSDS) and usage instruction manual for the necessary instructions for handling this material.