High Frequency Application Solder Resist

GFR-150 / GFR-150C

2-component type heat curing ink for flexible printed circuit boards with low dielectric constant and low dielectric loss tangent for 5G

□ Main features

1. It shows low dielectric properties with a dielectric constant of 2.9 or less and a dielectric loss tangent of 0.006 or less at 20GHz.
2. It is flame-retardant and equivalent to VTM-0.
3. It has good adhesion to various substrates (PET, ITO, glass, copper, etc.).
4. It retains high insulation even after being exposed to high temperature and high humidity environment for a long time.
5. The cured coating film has excellent solvent resistance.

□ Main characteristics

Characteristic item	Representative value	Remarks
Color（main agent）	Milky white（GFR-150） Black (GFR-150C)	Visual （Paste color）
Viscosity（25℃）	120～180 d Pa･s（GFR-150） 200～300 d Pa･s (GFR-150C)	B-8U viscometer (main agent)
Main agent/hardener mixing ratio	100g / 10～12g	Hardener : Additive G-5
Curing condition	150℃×30min.	Heat circulating BOX drying oven
Pot life	5 hours	25℃
Adhesion	100/100（on PET film）	Cross-cut･tape peel
	100/10 (on copper foil)	
	100/100（on ITO）	
	100/100 (on glass)	
Coated film surface hardness	2 H	Pencil hardness（JIS K 5600）
Solvent resistance	No abnormality	IPA, Ethyl acetate rubbing
Dielectric constant (20GHz)	2.7～2.9	Cavity resonator method TE-mode
Dielectric loss tangent(20GHz)	0.005～0.006	
Insulation resistance value	1E+14Ω ≦	85℃/85% 1000 h
Flame retardance	VTM-0 equivalent	UL-94 VTM standards

※The values described in this technical data are experimental values, not guaranteed values.

<Shelf life> Main agent : 6 months ･･･ 25℃ or less Stored in a cool dark place
Hardener : 6 months ･･･ 25℃ or less Stored in a cool dark place

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