

Low Dielectric 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°C) | 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°C×30min. | Heat circulating BOX drying oven |
| Pot life | 5 hours | 25°C |
| 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°C/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°C or less Stored in a cool dark place
Hardener : 6 months ∙∙ 25°C or less Stored in a cool dark place

※本カタログ記載の数値は代表値であり、規格値ではありません。Numerical values shown on this catalog are typical values, not values of standard. / 本目録記載の数値が代表値、並非規格値

