

# ForTii® LDS51B

## PPA-GF30 FR(40)

30% Glass Reinforced, PA4T, Halogen free and free of red phosphorous, Certified V-0 at 0.4mm, Laser Direct Structuring (LDS)

ForTii® LDS51B is a truly reflow compatible and halogen-free flame retardancy grade. LDS51B has superior plating performance and is compatible with a broad range of laser settings enabling high resolution and fine line capability.

| Properties                             | Typical Data      | Unit              | Test Method  |
|--|-------------------|-------------------|--------------|
| <b>Rheological properties</b>          | <b>dry / cond</b> |                   |              |
| Molding shrinkage (parallel)           | 0.3 / *           | %                 | ISO 294-4    |
| Molding shrinkage (normal)             | 1 / *             | %                 | ISO 294-4    |
| <b>Mechanical properties</b>           | <b>dry / cond</b> |                   |              |
| Tensile modulus                        | 11500 / 11800     | MPa               | ISO 527-1/-2 |
| Tensile modulus (120°C)                | 6000 / -          | MPa               | ISO 527-1/-2 |
| Tensile modulus (160°C)                | 3100              | MPa               | ISO 527-1/-2 |
| Stress at break                        | 110 / 100         | MPa               | ISO 527-1/-2 |
| Stress at break (120°C)                | 57 / -            | MPa               | ISO 527-1/-2 |
| Stress at break (160°C)                | 37                | MPa               | ISO 527-1/-2 |
| Strain at break                        | 1.6 / 1.6         | %                 | ISO 527-1/-2 |
| Strain at break (120°C)                | 3 / -             | %                 | ISO 527-1/-2 |
| Strain at break (160°C)                | 5                 | %                 | ISO 527-1/-2 |
| Flexural modulus                       | 11300 / 11600     | MPa               | ISO 178      |
| Flexural strength                      | 165 / 150         | MPa               | ISO 178      |
| Flexural modulus (120°C)               | 6400              | MPa               | ISO 178      |
| Flexural modulus (160°C)               | 3600              | MPa               | ISO 178      |
| Charpy impact strength (+23°C)         | 26 / 26           | kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy notched impact strength (+23°C) | 3 / 3             | kJ/m <sup>2</sup> | ISO 179/1eA  |



## Property Data

# ForTii<sup>®</sup> LDS51B

| Properties                                   | Typical Data  | Unit              | Test Method    |
|--|---------------|-------------------|----------------|
| <b>Thermal properties</b> dry / cond         |               |                   |                |
| Melting temperature (10°C/min)               | 325 / *       | °C                | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa)    | 290 / *       | °C                | ISO 75-1/-2    |
| Coeff. of linear therm. expansion (parallel) | 0.3           | E-4/°C            | ASTM D696      |
| Coeff. of linear therm. expansion (normal)   | 0.4           | E-4/°C            | ASTM D696      |
| <b>Electrical properties</b> dry / cond      |               |                   |                |
| Volume resistivity                           | >1E13 / >1E13 | Ohm*m             | IEC 62631-3-1  |
| Comparative tracking index                   | 400 / -       | V                 | IEC 60112      |
| Relative permittivity (1GHz)                 | 4.13 / 4.23   | -                 | IEC 60250      |
| <b>Other properties</b> dry / cond           |               |                   |                |
| Humidity absorption                          | 1.3 / *       | %                 | Sim. to ISO 62 |
| Density                                      | 1580 / -      | kg/m <sup>3</sup> | ISO 1183       |

