Property Data

Envalior
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# ForTii® JTX2

## PPA–GF30

*30% Glass Fiber Reinforced, PA4T, Electro–friendly*

Print Date: 2026–04–09

ForTii® JTX2 has robust mechanical performance and has good reliability in thermal ageing and mechanical shocks. JTX2 has consistent performance in injection molding processing and a low risk of blistering due to its JEDEC MLS 1 rating for specified thicknesses. JTX2 is the best candidate for HB reflow headers/connectors in (automotive) electronics.

| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|---|---|---|---|
| **RHEOLOGICAL PROPERTIES** | **DRY / COND** | | |
| Molding shrinkage (parallel) | 0.4 / * | % | ISO 294–4 |
| Molding shrinkage (normal) | 1.2 / * | % | ISO 294–4 |
| **MECHANICAL PROPERTIES** | **DRY / COND** | | |
| Tensile modulus | 11300 / 11500 | MPa | ISO 527–1/–2 |
| Tensile modulus (80°C) | 10500 / 6200 | MPa | ISO 527–1/–2 |
| Tensile modulus (120°C) | 8000 / – | MPa | ISO 527–1/–2 |
| Tensile modulus (160°C) | 4500 | MPa | ISO 527–1/–2 |
| Tensile modulus (200°C) | 4000 | MPa | ISO 527–1/–2 |
| Stress at break | 200 / 180 | MPa | ISO 527–1/–2 |
| Stress at break (80°C) | 180 / 95 | MPa | ISO 527–1/–2 |
| Stress at break (120°C) | 135 / – | MPa | ISO 527–1/–2 |
| Stress at break (160°C) | 90 | MPa | ISO 527–1/–2 |
| Stress at break (200°C) | 75 | MPa | ISO 527–1/–2 |
| Strain at break | 2.2 / 2 | % | ISO 527–1/–2 |
| Strain at break (80°C) | 2.6 / 6 | % | ISO 527–1/–2 |
| Strain at break (120°C) | 4.3 / – | % | ISO 527–1/–2 |
| Strain at break (160°C) | 6 | % | ISO 527–1/–2 |
| Strain at break (200°C) | 6 | % | ISO 527–1/–2 |

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| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|---|---|---|---|
| Flexural modulus | 10500 / 11000 | MPa | ISO 178 |
| Flexural strength | 300 / 270 | MPa | ISO 178 |
| Flexural modulus (120°C) | 7500 | MPa | ISO 178 |
| Flexural modulus (160°C) | 4500 | MPa | ISO 178 |
| Flexural modulus (200°C) | 4000 | MPa | ISO 178 |
| Charpy impact strength (+23°C) | 60 / 50 | kJ/m² | ISO 179/1eU |
| Charpy impact strength (–30°C) | 55 / 45 | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 10 / 9 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength (–30°C) | 10 / 9 | kJ/m² | ISO 179/1eA |
| **THERMAL PROPERTIES** | **DRY / COND** | | |
| Melting temperature (10°C/min) | 325 / * | °C | ISO 11357–1/–3 |
| Temp. of deflection under load (1.80 MPa) | 305 / * | °C | ISO 75–1/–2 |
| Coeff. of linear therm. expansion (parallel) | 0.18 / * | E–4/°C | ISO 11359–1/–2 |
| Coeff. of linear therm. expansion (normal) | 0.6 / * | E–4/°C | ISO 11359–1/–2 |
| Coeff. of linear therm. expansion (parallel) | 0.33 | E–4/°C | ASTM D696 |
| Coeff. of linear therm. expansion (normal) | 0.4 | E–4/°C | ASTM D696 |
| Burning Behav. at 3.0 mm nom. thickn. | HB / * | class | IEC 60695–11–10 |
| Thickness tested | HB / * | mm | IEC 60695–11–10 |
| UL recognition | 3 / * | – | – |
| Thermal Index 5000 hrs | 167 | °C | IEC 60216/ISO 527–1/–2 |
| **ELECTRICAL PROPERTIES** | **DRY / COND** | | |
| Volume resistivity | >1E13 / >1E13 | Ohm*m | IEC 62631–3–1 |
| Electric strength | 43 / 40 | kV/mm | IEC 60243–1 |
| Comparative tracking index | 600 / – | V | IEC 60112 |
| Relative permittivity (100Hz) | 5 / 5 | – | IEC 62631–2–1 |
| Relative permittivity (1 MHz) | 4.5 / 4.5 | – | IEC 62631–2–1 |
| Relative permittivity (1GHz) | 3.9 / 4 | – | IEC 61189–2–721 |

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| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|---|---|---|---|
| Relative permittivity (10GHz) | 3.8 / 3.9 | – | IEC 61189–2–721 |
| **OTHER PROPERTIES** | **DRY / COND** | | |
| Humidity absorption | 2 / * | % | Sim. to ISO 62 |
| Density | 1430 / – | kg/m³ | ISO 1183 |