

Stanyl® TW241F3

PA46–GF15

15% Glass Reinforced, Heat Stabilized, Lubricated

Stanyl® TW241F3 is a high heat polyamide that offers excellent creep resistance, strength, stiffness and fatigue resistance especially at high temperatures, in combination with cycle–time advantages and excellent flow.

| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|------------------------------|-------------------|------|--------------|
| MECHANICAL PROPERTIES | | | |
| | DRY / COND | | |
| Tensile modulus | 6100 / 2800 | MPa | ISO 527–1/–2 |
| Tensile modulus (120°C) | 3000 / – | MPa | ISO 527–1/–2 |
| Tensile modulus (160°C) | 2650 | MPa | ISO 527–1/–2 |
| Tensile modulus (180°C) | 2500 | MPa | ISO 527–1/–2 |
| Tensile modulus (200°C) | 2350 | MPa | ISO 527–1/–2 |
| Stress at break | 140 / 85 | MPa | ISO 527–1/–2 |
| Stress at break (120°C) | 82 / – | MPa | ISO 527–1/–2 |
| Stress at break (160°C) | 74 | MPa | ISO 527–1/–2 |
| Stress at break (180°C) | 70 | MPa | ISO 527–1/–2 |
| Stress at break (200°C) | 66 | MPa | ISO 527–1/–2 |
| Strain at break | 3.5 / 12 | % | ISO 527–1/–2 |
| Strain at break (120°C) | 13 / – | % | ISO 527–1/–2 |
| Strain at break (160°C) | 12 | % | ISO 527–1/–2 |
| Strain at break (180°C) | 12 | % | ISO 527–1/–2 |
| Strain at break (200°C) | 12 | % | ISO 527–1/–2 |
| Flexural modulus | 5800 / 2800 | MPa | ISO 178 |
| Flexural modulus (120°C) | 2700 | MPa | ISO 178 |
| Flexural modulus (160°C) | 2600 | MPa | ISO 178 |
| Flexural strength | 235 / 125 | MPa | ISO 178 |
| Flexural strength (120°C) | 80 | MPa | ISO 178 |
| Flexural strength (160°C) | 75 | MPa | ISO 178 |

Property Data

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| <i>PROPERTIES</i> | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--|---------------------|-------------------|--------------------|
| Charpy impact strength (+23°C) | 50 / 100 | kJ/m ² | ISO 179/1eU |
| Charpy impact strength (-30°C) | 45 / 50 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 6 / 13 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (-30°C) | 6 / 6 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength (+23°C) | 6 / 13 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength (-40°C) | 6 / 6 | kJ/m ² | ISO 180/1A |

THERMAL PROPERTIES

DRY / COND

| | | | |
|--|---------|--------|-----------------|
| Melting temperature (10°C/min) | 295 / * | °C | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 275 / * | °C | ISO 75-1/-2 |
| Temp. of deflection under load (0.45 MPa) | 290 / * | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion (parallel) | 0.5 / * | E-4/°C | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion (normal) | 0.8 / * | E-4/°C | ISO 11359-1/-2 |
| Burning Behav. at 3.0 mm nom. thickn. | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 3 / * | mm | IEC 60695-11-10 |
| UL recognition | Yes / * | - | - |
| Relative Temperature Index – electrical | 65 | °C | UL746B |
| RTI electrical (Thickness (1) tested) | 0.75 | mm | UL746B |

OTHER PROPERTIES

DRY / COND

| | | | |
|---------------------|----------|-------------------|----------------|
| Humidity absorption | 3.15 / * | % | Sim. to ISO 62 |
| Density | 1290 / - | kg/m ³ | ISO 1183 |

Property Data

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Tens. fatigue 8Hz, T, R=0.1 ,
dry

