

Stanyl® TW341 B–MB

PA46

Heat Stabilized, Lubricated

Print Date: 2024–04–16

Stanyl® TW341 is a V2 UL–rated, non–reinforced high heat polyamide that offers excellent wear & friction properties in combination with outstanding creep resistance, strength, stiffness and fatigue resistance especially at high temperatures in combination with cycle–time advantages and excellent flow.

Sustainability

Bio–based
 Mass balanced

| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|---------------------------------|-------------------|------|-------------------|
| RHEOLOGICAL PROPERTIES | | | |
| | DRY / COND | | |
| Molding shrinkage [parallel] | 2 / * | % | Sim. to ISO 294–4 |
| Molding shrinkage [normal] | 2 / * | % | Sim. to ISO 294–4 |
| MECHANICAL PROPERTIES | | | |
| | DRY / COND | | |
| Tensile modulus | 3300 / 1000 | MPa | ISO 527–1/–2 |
| Tensile modulus (120°C) | 800 / – | MPa | ISO 527–1/–2 |
| Tensile modulus (160°C) | 650 | MPa | ISO 527–1/–2 |
| Tensile modulus (180°C) | 600 | MPa | ISO 527–1/–2 |
| Tensile modulus (200°C) | 500 | MPa | ISO 527–1/–2 |
| Yield stress | 100 / 55 | MPa | ISO 527–1/–2 |
| Yield stress (120°C) | 50 | MPa | ISO 527–1/–2 |
| Yield stress (160°C) | 40 | MPa | ISO 527–1/–2 |
| Yield stress (180°C) | 35 | MPa | ISO 527–1/–2 |
| Yield stress (200°C) | 30 | MPa | ISO 527–1/–2 |
| Nominal strain at break | 40 / >50 | % | ISO 527–1/–2 |
| Nominal strain at break (120°C) | >50 | % | ISO 527–1/–2 |
| Nominal strain at break (160°C) | >50 | % | ISO 527–1/–2 |

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Property Data

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| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|--|--------------|-------------------|-----------------|
| Nominal strain at break (180°C) | >50 | % | ISO 527–1/–2 |
| Nominal strain at break (200°C) | >50 | % | ISO 527–1/–2 |
| Flexural modulus | 3000 / 900 | MPa | ISO 178 |
| Flexural modulus (120°C) | 800 | MPa | ISO 178 |
| Flexural modulus (160°C) | 600 | MPa | ISO 178 |
| Flexural strength | 150 / 50 | MPa | ISO 178 |
| Flexural strength (120°C) | 50 | MPa | ISO 178 |
| Flexural strength (160°C) | 40 | MPa | ISO 178 |
| Charpy impact strength (+23°C) | N / N | kJ/m ² | ISO 179/1eU |
| Charpy impact strength (–30°C) | N / N | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 10 / 35 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (–30°C) | 4 / 4 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength (+23°C) | 10 / 35 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength (–40°C) | 4 / 4 | 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) | 190 / * | °C | ISO 75–1/–2 |
| Temp. of deflection under load (0.45 MPa) | 280 / * | °C | ISO 75–1/–2 |
| Coeff. of linear therm. expansion (parallel) | 0.85 / * | E–4/°C | ISO 11359–1/–2 |
| Coeff. of linear therm. expansion (normal) | 1.1 / * | E–4/°C | ISO 11359–1/–2 |
| Burning Behav. at 1.5 mm nom. thickn. | V–2 / * | class | IEC 60695–11–10 |
| Thickness tested | 1.5 / * | mm | IEC 60695–11–10 |
| UL recognition | Yes / * | – | – |
| Burning Behav. at 3.0 mm nom. thickn. | V–2 / * | class | IEC 60695–11–10 |
| Thickness tested | 3 / * | mm | IEC 60695–11–10 |
| UL recognition | Yes / * | – | – |
| Relative Temperature Index – electrical | 150 | °C | UL746B |
| RTI electrical (Thickness (1) tested) | 0.75 | mm | UL746B |

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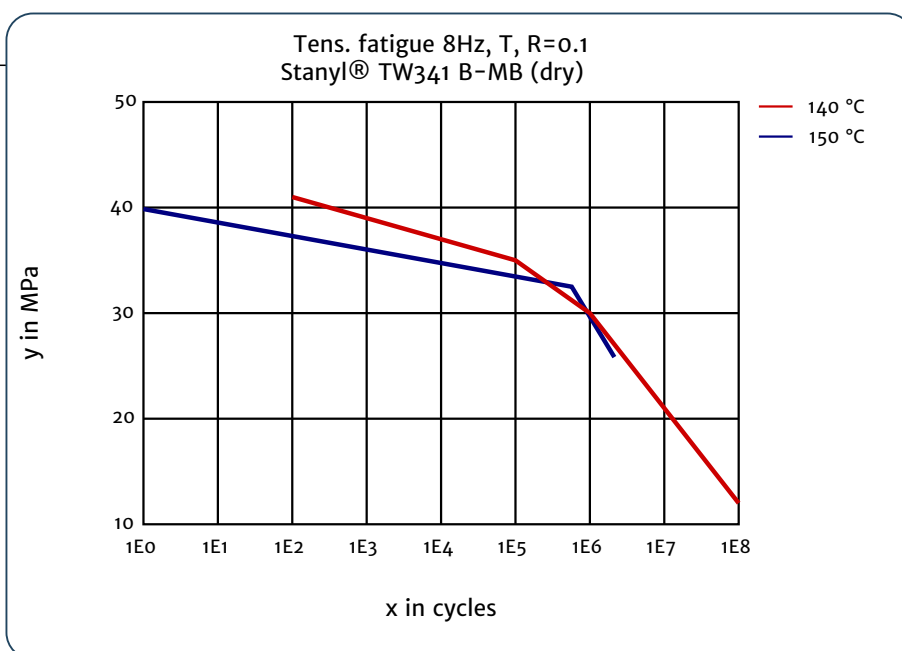
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| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|------------------------|--------------|------|------------------------|
| Thermal Index 5000 hrs | 152 | °C | IEC 60216/ISO 527-1/-2 |

| ELECTRICAL PROPERTIES | DRY / COND | | |
|-------------------------------|------------|-------|---------------|
| Volume resistivity | 1E13 / 1E7 | Ohm*m | IEC 62631-3-1 |
| Electric strength | 25 / 15 | kV/mm | IEC 60243-1 |
| Comparative tracking index | 400 / - | V | IEC 60112 |
| Relative permittivity (100Hz) | 3.9 / 22 | - | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 3.6 / 4.5 | - | IEC 62631-2-1 |

| OTHER PROPERTIES | DRY / COND | | |
|---------------------|------------|-------|----------------|
| Humidity absorption | 3.7 / * | % | Sim. to ISO 62 |
| Density | 1180 / - | kg/m³ | ISO 1183 |

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



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