

Stanyl® TW200B6

PA46–CF30

30% Carbon Reinforced, Heat Stabilized, Lubricated

Print Date: 2024–03–27

Stanyl® TW200B6 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. TW200B6 has an excellent track–record in gear applications.

| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|-------------------------------|-------------------|------|--------------|
| RHEOLOGICAL PROPERTIES | | | |
| | DRY / COND | | |
| Molding shrinkage (parallel) | 0.2 / * | % | ISO 294–4 |
| Molding shrinkage (normal) | 0.9 / * | % | ISO 294–4 |
| MECHANICAL PROPERTIES | | | |
| | DRY / COND | | |
| Tensile modulus | 23500 / 13500 | MPa | ISO 527–1/–2 |
| Tensile modulus (120°C) | 11000 / – | MPa | ISO 527–1/–2 |
| Tensile modulus (160°C) | 10000 | MPa | ISO 527–1/–2 |
| Tensile modulus (180°C) | 9500 | MPa | ISO 527–1/–2 |
| Tensile modulus (200°C) | 8700 | MPa | ISO 527–1/–2 |
| Stress at break | 250 / 165 | MPa | ISO 527–1/–2 |
| Stress at break (120°C) | 135 / – | MPa | ISO 527–1/–2 |
| Stress at break (160°C) | 115 | MPa | ISO 527–1/–2 |
| Stress at break (180°C) | 105 | MPa | ISO 527–1/–2 |
| Stress at break (200°C) | 90 | MPa | ISO 527–1/–2 |
| Strain at break | 1.7 / 3 | % | ISO 527–1/–2 |
| Strain at break (120°C) | 3 / – | % | ISO 527–1/–2 |
| Strain at break (160°C) | 3 | % | ISO 527–1/–2 |
| Strain at break (180°C) | 3 | % | ISO 527–1/–2 |
| Strain at break (200°C) | 3 | % | ISO 527–1/–2 |
| Flexural modulus | 20000 / 11000 | MPa | ISO 178 |

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Property Data

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| <i>PROPERTIES</i> | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--|---------------------|-------------------|--------------------|
| Flexural modulus (120°C) | 10500 | MPa | ISO 178 |
| Flexural modulus (160°C) | 10000 | MPa | ISO 178 |
| Flexural strength | 360 / 220 | MPa | ISO 178 |
| Flexural strength (120°C) | 195 | MPa | ISO 178 |
| Flexural strength (160°C) | 160 | MPa | ISO 178 |
| Charpy impact strength (+23°C) | 60 / 75 | kJ/m ² | ISO 179/1eU |
| Charpy impact strength (-30°C) | 50 / 50 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 8 / 14 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (-30°C) | 6.5 / 6.5 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength (+23°C) | 8 / 14 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength (-40°C) | 6.5 / 6.5 | 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) | 290 / * | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion (parallel) | 0.08 / * | E-4/°C | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion (normal) | 0.34 / * | E-4/°C | ISO 11359-1/-2 |

ELECTRICAL PROPERTIES

DRY / COND

| | | | |
|--------------------|-----------|-------|---------------|
| Volume resistivity | 10000 / - | Ohm*m | IEC 62631-3-1 |
|--------------------|-----------|-------|---------------|

OTHER PROPERTIES

DRY / COND

| | | | |
|---------------------|----------|-------------------|----------------|
| Humidity absorption | 2.6 / * | % | Sim. to ISO 62 |
| Density | 1290 / - | kg/m ³ | ISO 1183 |

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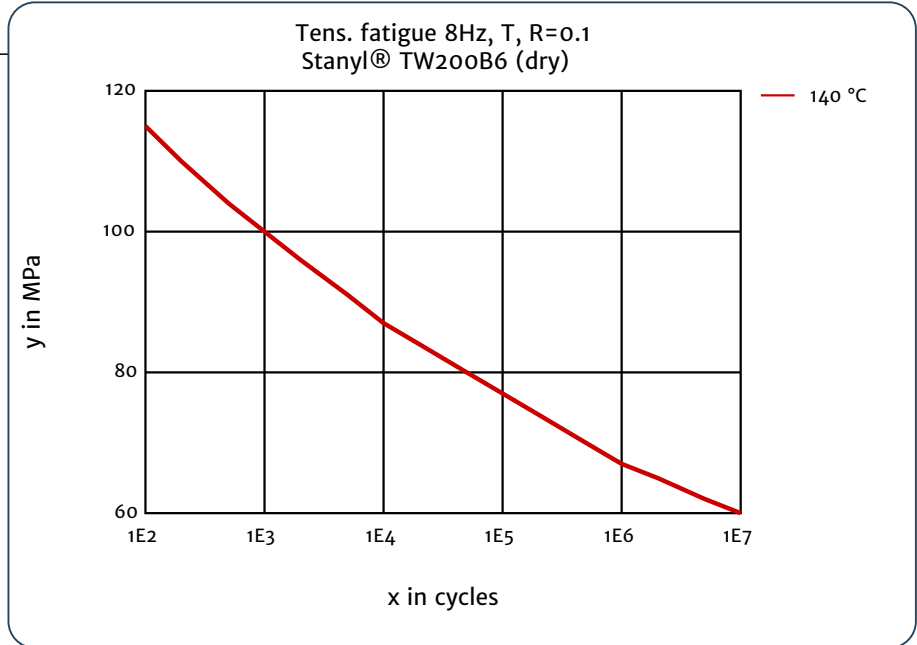
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Tens. fatigue 8Hz, T, R=0.1 ,
dry



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