

# Stanyl® TW271B6

## (PA46+PTFE)-CF30

30% Carbon Reinforced, Heat Stabilized, Wear and Friction Modified

Print Date: 2022-03-18

Stanyl® TW271B6 is a friction-modified 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. TW271B6 has an excellent track-record in gear applications.

Properties	Typical Data	Unit	Test Method
<b>Rheological properties</b>	dry / cond		
Molding shrinkage (parallel)	0.3 / *	%	ISO 294-4
Molding shrinkage (normal)	0.7 / *	%	ISO 294-4
<b>Mechanical properties</b>	dry / cond		
Tensile modulus	24000 / 14500	MPa	ISO 527-1/-2
Tensile modulus (120°C)	13500 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	12000	MPa	ISO 527-1/-2
Tensile modulus (180°C)	11500	MPa	ISO 527-1/-2
Tensile modulus (200°C)	11000	MPa	ISO 527-1/-2
Stress at break	260 / 170	MPa	ISO 527-1/-2
Stress at break (120°C)	140 / -	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)	95	MPa	ISO 527-1/-2
Strain at break	1.6 / 3.5	%	ISO 527-1/-2
Strain at break (120°C)	3.1 / -	%	ISO 527-1/-2
Strain at break (160°C)	3.1	%	ISO 527-1/-2
Strain at break (180°C)	3.1	%	ISO 527-1/-2
Strain at break (200°C)	3.1	%	ISO 527-1/-2
Flexural modulus	22000 / -	MPa	ISO 178

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## Property Data

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Properties	Typical Data	Unit	Test Method
Flexural strength	365 / -	MPa	ISO 178
Charpy impact strength (+23°C)	50 / 80	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	50 / 55	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	8 / 17	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	7 / 7	kJ/m <sup>2</sup>	ISO 179/1eA

### 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)	0.25 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.35 / *	E-4/°C	ISO 11359-1/-2

### Other properties

dry / cond

Humidity absorption	2.3 / *	%	Sim. to ISO 62
Density	1320 / -	kg/m <sup>3</sup>	ISO 1183

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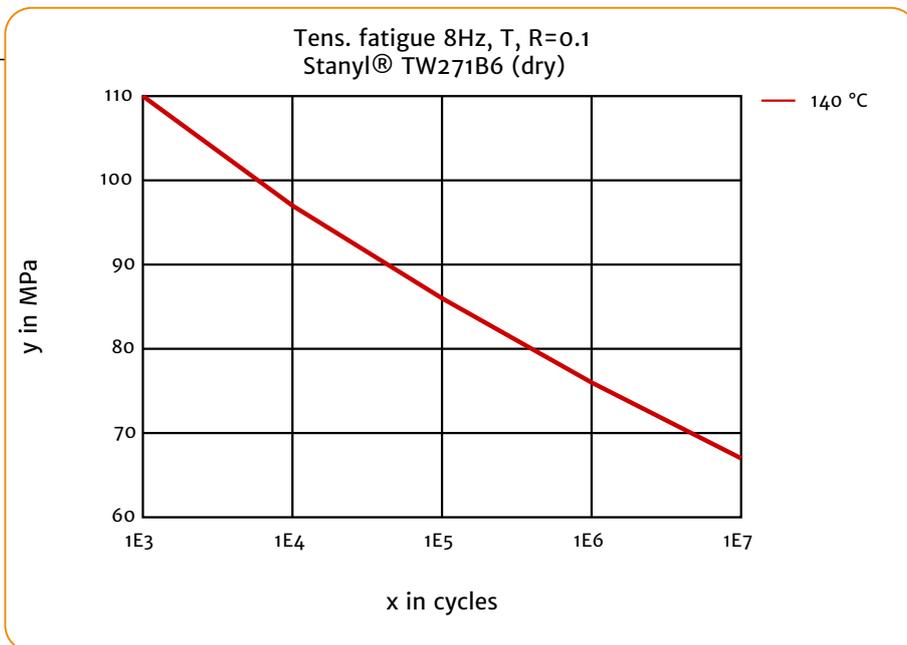
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Tens. fatigue 8Hz, T, R=0.1 ,  
dry



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