

# Stanyl® TW271B6

## (PA46+PTFE)—CF30

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

Print Date: 2025-10-22

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>			
	<b>DRY / COND</b>		
Molding shrinkage (parallel)	0.3 / *	%	ISO 294-4
Molding shrinkage (normal)	0.7 / *	%	ISO 294-4
<b>MECHANICAL PROPERTIES</b>			
	<b>DRY / COND</b>		
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
Flexural strength	365 / –	MPa	ISO 178

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Charpy impact strength (+23°C)	50 / 80	kJ/m²	ISO 179/1eU
Charpy impact strength (−30°C)	50 / 55	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	8 / 17	kJ/m²	ISO 179/1eA
Charpy notched impact strength (−30°C)	7 / 7	kJ/m²	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	ASTM D696
Coeff. of linear therm. expansion (normal)	0.35	E-4/°C	ASTM D696

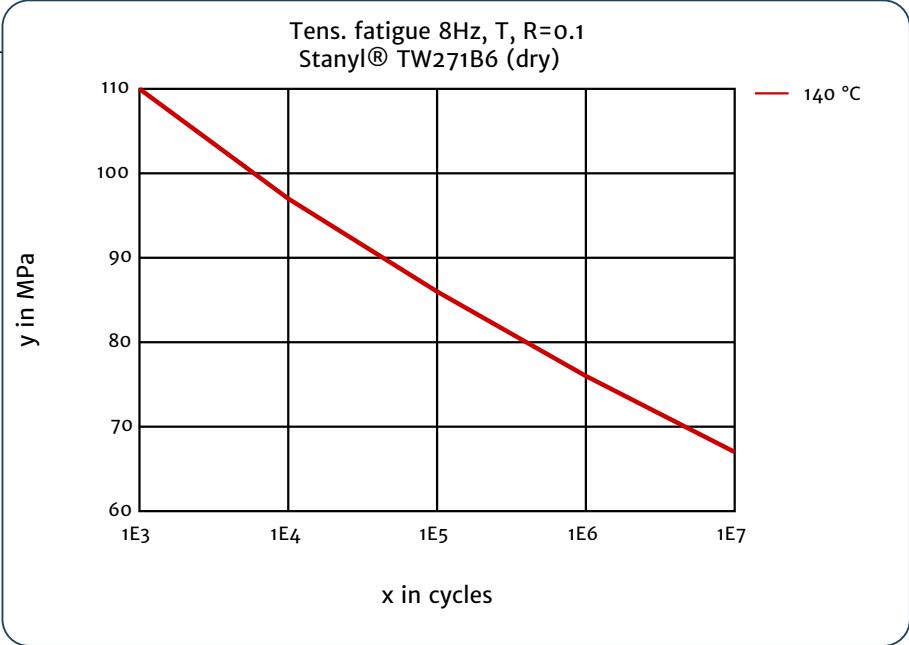
OTHER PROPERTIES	DRY / COND		
Humidity absorption	2.3 / *	%	Sim. to ISO 62
Density	1320 / –	kg/m³	ISO 1183

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



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