

Stanyl[®] TW271B6

(PA46+PTFE)–CF30

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

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
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	0.3 / *	%	ISO 294–4
Molding shrinkage (normal)	0.7 / *	%	ISO 294–4
MECHANICAL PROPERTIES			
	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

Property Data

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Flexural strength	365 / –	MPa	ISO 178
Charpy impact strength (+23°C)	50 / 80	kJ/m ²	ISO 179/1eU
Charpy impact strength (–30°C)	50 / 55	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	8 / 17	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (–30°C)	7 / 7	kJ/m ²	ISO 179/1eA
<i>THERMAL PROPERTIES</i>		<i>DRY / COND</i>	
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
<i>OTHER PROPERTIES</i>		<i>DRY / COND</i>	
Humidity absorption	2.3 / *	%	Sim. to ISO 62
Density	1320 / –	kg/m ³	ISO 1183

Property Data

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

