

Stanyl[®] TW200B6

PA46–CF30

30% Carbon Reinforced, Heat Stabilized, Lubricated

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			
	<i>DRY / COND</i>		
Molding shrinkage (parallel)	0.2 / *	%	ISO 294–4
Molding shrinkage (normal)	0.9 / *	%	ISO 294–4
MECHANICAL PROPERTIES			
	<i>DRY / COND</i>		
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

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
<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)	0.08 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.34 / *	E-4/°C	ISO 11359-1/-2
<i>ELECTRICAL PROPERTIES</i>		<i>DRY / COND</i>	
Volume resistivity	10000 / -	Ohm*m	IEC 62631-3-1
<i>OTHER PROPERTIES</i>		<i>DRY / COND</i>	
Humidity absorption	2.6 / *	%	Sim. to ISO 62
Density	1290 / -	kg/m ³	ISO 1183

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

