

Stanyl® TW200F6

PA46-GF30

30% Glass Reinforced, Heat Stabilized

Print Date: 2023-11-24

Stanyl® TW200F6 is a high heat polyamide that offers excellent creep resistance, strength, stiffness and fatigue resistance, not only at ambient temperatures but especially at high temperatures, while at the same time providing cycle-time advantages and excellent flow.

PROPERTIES	TYPICAL DATA		UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES				<i>DRY / COND</i>
Molding shrinkage [parallel]	0.5 / *		%	Sim. to ISO 294-4
Molding shrinkage [normal]	1.3 / *		%	Sim. to ISO 294-4
MECHANICAL PROPERTIES				<i>DRY / COND</i>
Tensile modulus	1.45E6 / 870000	psi		ISO 527-1/-2
Tensile modulus (120°C)	769000 / –	psi		ISO 527-1/-2
Tensile modulus (160°C)	689000	psi		ISO 527-1/-2
Tensile modulus (180°C)	660000	psi		ISO 527-1/-2
Tensile modulus (200°C)	624000	psi		ISO 527-1/-2
Stress at break	30500 / 16700	psi		ISO 527-1/-2
Stress at break (120°C)	16700 / –	psi		ISO 527-1/-2
Stress at break (160°C)	14500	psi		ISO 527-1/-2
Stress at break (180°C)	13800	psi		ISO 527-1/-2
Stress at break (200°C)	13100	psi		ISO 527-1/-2
Strain at break	3.7 / 6	%		ISO 527-1/-2
Strain at break (120°C)	7.5 / –	%		ISO 527-1/-2
Strain at break (160°C)	8	%		ISO 527-1/-2
Strain at break (180°C)	8	%		ISO 527-1/-2
Strain at break (200°C)	8	%		ISO 527-1/-2
Flexural modulus	1.38E6 / 798000	psi		ISO 178

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Flexural modulus (120°C)	740000	psi	ISO 178
Flexural modulus (160°C)	711000	psi	ISO 178
Flexural modulus (180°C)	653000	psi	ISO 178
Flexural modulus (200°C)	638000	psi	ISO 178
Flexural strength	43500 / 26100	psi	ISO 178
Flexural strength (120°C)	23200	psi	ISO 178
Flexural strength (160°C)	18900	psi	ISO 178
Flexural strength (180°C)	16000	psi	ISO 178
Flexural strength (200°C)	15200	psi	ISO 178
Charpy impact strength (+23°C)	38.1 / 47.6	ftlb/in ²	ISO 179/1eU
Charpy impact strength (-30°C)	30.9 / 35.7	ftlb/in ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	5.71 / 9.99	ftlb/in ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	5.23 / 5.23	ftlb/in ²	ISO 179/1eA
Izod notched impact strength (+23°C)	5.71 / 9.99	ftlb/in ²	ISO 180/1A
Izod notched impact strength (-40°C)	5.23 / 5.23	ftlb/in ²	ISO 180/1A

THERMAL PROPERTIES	DRY / COND		
Melting temperature (10°C/min)	563 / *	°F	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	554 / *	°F	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	554 / *	°F	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.139 / *	E-4/°F	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.333 / *	E-4/°F	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.0591 / *	in	IEC 60695-11-10
UL recognition	Yes / *	—	—
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.118 / *	in	IEC 60695-11-10
UL recognition	Yes / *	—	—
Relative Temperature Index – electrical	284	°F	UL746B

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RTI electrical (Thickness (1) tested)	0.0354	in	UL746B
Thermal Index 5000 hrs	351	°F	IEC 60216/ISO 527-1/-2

ELECTRICAL PROPERTIES

	DRY / COND		
Volume resistivity	1E12 / 1E7	Ohm*m	IEC 62631-3-1
Electric strength	762 / 508	kV/in	IEC 60243-1
Comparative tracking index	300 / –	V	IEC 60112
Relative permittivity (100Hz)	4.3 / 16	–	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 4.7	–	IEC 62631-2-1

OTHER PROPERTIES

	DRY / COND		
Humidity absorption	2.6 / *	%	Sim. to ISO 62
Density	88 / –	lb/ft³	ISO 1183

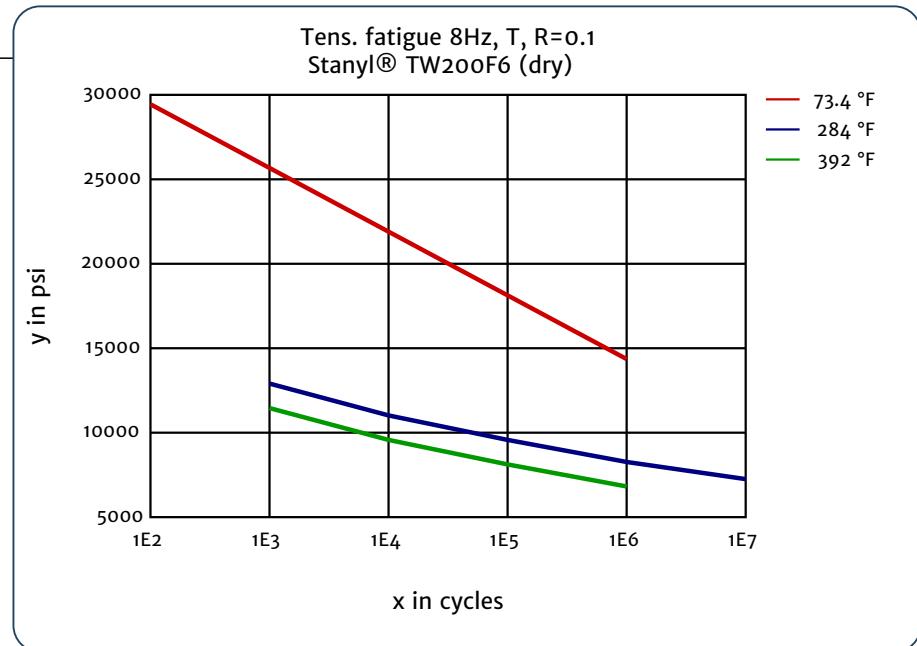
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Tens. fatigue 8Hz, T, R=0.1 ,
dry



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