

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			
	DRY / COND		
Molding shrinkage [parallel]	0.5 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	1.3 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
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/in²	ISO 179/1eU
Charpy impact strength (−30°C)	30.9 / 35.7	ftlb/in²	ISO 179/1eU
Charpy notched impact strength (+23°C)	5.71 / 9.99	ftlb/in²	ISO 179/1eA
Charpy notched impact strength (−30°C)	5.23 / 5.23	ftlb/in²	ISO 179/1eA
Izod notched impact strength (+23°C)	5.71 / 9.99	ftlb/in²	ISO 180/1A
Izod notched impact strength (−40°C)	5.23 / 5.23	ftlb/in²	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

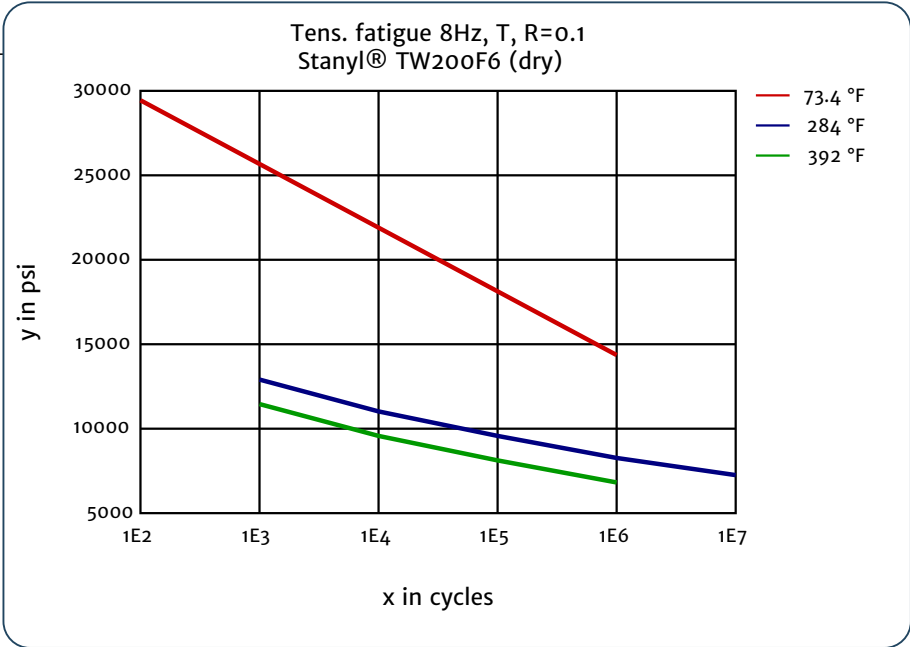
OTHER PROPERTIES	DRY / COND		
Humidity absorption	2.6 / *	%	Sim. to ISO 62
Density	88 / -	lb/ft³	ISO 1183

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



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