

Stanyl® TW241F6

PA46—GF30

30% Glass Fiber Reinforced, Heat Stabilized, Lubricated

Print Date: 2025-05-13

Stanyl® TW241F6 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.

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	10000 / 6000	MPa	ISO 527-1/-2
Tensile modulus (120°C)	5300 / —	MPa	ISO 527-1/-2
Tensile modulus (160°C)	4750	MPa	ISO 527-1/-2
Tensile modulus (180°C)	4550	MPa	ISO 527-1/-2
Tensile modulus (200°C)	4300	MPa	ISO 527-1/-2
Stress at break	210 / 115	MPa	ISO 527-1/-2
Stress at break (120°C)	115 / —	MPa	ISO 527-1/-2
Stress at break (160°C)	100	MPa	ISO 527-1/-2
Stress at break (180°C)	95	MPa	ISO 527-1/-2
Stress at break (200°C)	90	MPa	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	9500 / 5500	MPa	ISO 178
Flexural modulus (120°C)	5100	MPa	ISO 178

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Flexural modulus (160°C)	4900	MPa	ISO 178
Flexural modulus (180°C)	4500	MPa	ISO 178
Flexural modulus (200°C)	4400	MPa	ISO 178
Flexural strength	300 / 180	MPa	ISO 178
Flexural strength (120°C)	160	MPa	ISO 178
Flexural strength (160°C)	130	MPa	ISO 178
Flexural strength (180°C)	110	MPa	ISO 178
Flexural strength (200°C)	105	MPa	ISO 178
Charpy impact strength (+23°C)	80 / 100	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	65 / 75	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 21	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	11 / 11	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	12 / 21	kJ/m²	ISO 180/1A
Izod notched impact strength (-40°C)	11 / 11	kJ/m²	ISO 180/1A

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
Temp. of deflection under load (0.45 MPa)	290 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.19 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.72 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (parallel)	0.25	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.6	E-4/°C	ASTM D696
Thermal conductivity through plane	0.39	W/(m K)	ASTM E1461
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	Yes / *	—	—
Burning Behav. at 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
UL recognition	Yes / *	—	—
Relative Temperature Index – electrical	65	°C	UL746B
RTI electrical (Thickness (1) tested)	0.75	mm	UL746B
Thermal Index 5000 hrs	177	°C	IEC 60216/ISO 527-1/-2

ELECTRICAL PROPERTIES	DRY / COND		
Volume resistivity	1E12 / 1E7	Ohm*m	IEC 62631-3-1
Electric strength	30 / 20	kV/mm	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

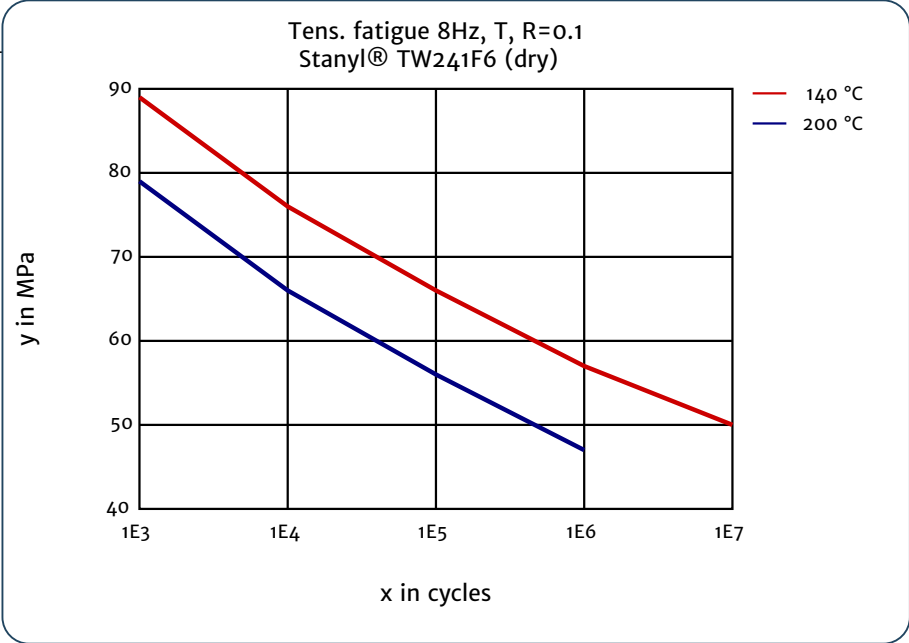
OTHER PROPERTIES	DRY / COND		
Humidity absorption	2.6 / *	%	Sim. to ISO 62
Density	1410 / —	kg/m³	ISO 1183

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



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