

Stanyl® TW200F8

PA46—GF40

40% Glass Fiber Reinforced, Heat Stabilized

Print Date: 2025–10–04

Stanyl® TW200F8 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]	1.1 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	13000 / 8000	MPa	ISO 527–1/–2
Tensile modulus (120°C)	6900 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	6100	MPa	ISO 527–1/–2
Tensile modulus (180°C)	5600	MPa	ISO 527–1/–2
Tensile modulus (200°C)	5200	MPa	ISO 527–1/–2
Stress at break	235 / 140	MPa	ISO 527–1/–2
Stress at break (120°C)	130 / –	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)	100	MPa	ISO 527–1/–2
Strain at break	3.3 / 6	%	ISO 527–1/–2
Strain at break (120°C)	6 / –	%	ISO 527–1/–2
Strain at break (160°C)	7	%	ISO 527–1/–2
Strain at break (180°C)	7	%	ISO 527–1/–2
Strain at break (200°C)	8	%	ISO 527–1/–2
Flexural modulus	11800 / 7000	MPa	ISO 178
Flexural modulus (120°C)	5800	MPa	ISO 178

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Flexural modulus (160°C)	5200	MPa	ISO 178
Flexural strength	325 / 220	MPa	ISO 178
Flexural strength (120°C)	170	MPa	ISO 178
Flexural strength (160°C)	140	MPa	ISO 178
Flexural strength (180°C)	8	MPa	ISO 178
Flexural strength (200°C)	8	MPa	ISO 178
Charpy impact strength (+23°C)	95 / 100	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	75 / 85	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	14 / 21	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	12 / 12	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	14 / 21	kJ/m²	ISO 180/1A
Izod notched impact strength (-40°C)	12 / 12	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)	0.25	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.5	E-4/°C	ASTM D696
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 / *	—	—
Relative Temperature Index – electrical	65	°C	UL746B
RTI electrical (Thickness (1) tested)	1.5	mm	UL746B
Thermal Index 5000 hrs	177	°C	IEC 60216/ISO 527-1/-2

ELECTRICAL PROPERTIES	DRY / COND		
Volume resistivity	1E12 / 1E8	Ohm*m	IEC 62631-3-1
Electric strength	30 / 20	kV/mm	IEC 60243-1

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
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	2.2 / *	%	Sim. to ISO 62
Density	1510 / –	kg/m³	ISO 1183

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