Property Data

Envalior
Imagine the Future

Stanyl® TW200F3

PA46–GF15

15% Glass Fiber Reinforced, Heat Stabilized

Print Date: 2025–10–04

Stanyl® TW200F3 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 / *	%	ISO 294–4
Molding shrinkage (normal)	1.2 / *	%	ISO 294–4
MECHANICAL PROPERTIES	**DRY / COND**		
Tensile modulus	6100 / 2800	MPa	ISO 527–1/–2
Tensile modulus (120°C)	3000 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	2650	MPa	ISO 527–1/–2
Tensile modulus (180°C)	2500	MPa	ISO 527–1/–2
Tensile modulus (200°C)	2350	MPa	ISO 527–1/–2
Stress at break	140 / 85	MPa	ISO 527–1/–2
Stress at break (120°C)	82 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	74	MPa	ISO 527–1/–2
Stress at break (180°C)	70	MPa	ISO 527–1/–2
Stress at break (200°C)	66	MPa	ISO 527–1/–2
Strain at break	3.5 / 12	%	ISO 527–1/–2
Strain at break (120°C)	13 / –	%	ISO 527–1/–2
Strain at break (160°C)	12	%	ISO 527–1/–2
Strain at break (180°C)	12	%	ISO 527–1/–2
Strain at break (200°C)	12	%	ISO 527–1/–2
Flexural modulus	5800 / 2800	MPa	ISO 178
Flexural modulus (120°C)	2700	MPa	ISO 178

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Flexural modulus (160°C)	2600	MPa	ISO 178
Flexural strength	235 / 125	MPa	ISO 178
Flexural strength (120°C)	80	MPa	ISO 178
Flexural strength (160°C)	75	MPa	ISO 178
Charpy impact strength (+23°C)	50 / 100	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	45 / 50	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	6 / 13	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	6 / 6	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	6 / 13	kJ/m²	ISO 180/1A
Izod notched impact strength (–40°C)	6 / 6	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)	275 / *	°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)	0.5	E–4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.8	E–4/°C	ASTM D696
Thermal conductivity in plane	0.33	W/(m K)	ASTM E1461
Thermal conductivity through plane	0.29	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 / *	–	–
Relative Temperature Index – electrical	65	°C	UL746B
RTI electrical (Thickness (1) tested)	1.5	mm	UL746B
ELECTRICAL PROPERTIES	**DRY / COND**		
Volume resistivity	1E12 / 1E7	Ohm*m	IEC 62631–3–1
Comparative tracking index	400 / –	V	IEC 60112

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PROPERTIES	*TYPICAL DATA*	*UNIT*	*TEST METHOD*
OTHER PROPERTIES	***DRY / COND***		
Humidity absorption	3.15 / *	%	Sim. to ISO 62
Density	1290 / –	kg/m³	ISO 1183

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