

## Stanyl® TW200F8

## PA46-GF40

40% Glass Reinforced, Heat Stabilized

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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
<b>Rheological properties</b>			
	dry / cond		
Molding shrinkage [parallel]	0.5 / *	%	Sim. to ISO 294-4
Molding shrinkage [normal]	1.1 / *	%	Sim. to ISO 294-4
<b>Mechanical properties</b>			
	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)	5700	MPa	ISO 527-1/-2
Tensile modulus (200°C)	5300	MPa	ISO 527-1/-2
Stress at break	230 / 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 / 6	%	ISO 527-1/-2
Strain at break (120°C)	6.5 / -	%	ISO 527-1/-2
Strain at break (160°C)	6.5	%	ISO 527-1/-2
Strain at break (180°C)	6.5	%	ISO 527-1/-2
Strain at break (200°C)	6.5	%	ISO 527-1/-2
Flexural modulus	11500 / 7000	MPa	ISO 178
Flexural modulus (120°C)	5800	MPa	ISO 178

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
Charpy impact strength (+23°C)	95 / 100	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	75 / 85	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	14 / 21	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	12 / 12	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength (+23°C)	14 / 21	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength (-40°C)	12 / 12	kJ/m <sup>2</sup>	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	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.5 / *	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	IEC 60695-11-10
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.9 / *	mm	IEC 60695-11-10
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 60093
Electric strength	30 / 20	kV/mm	IEC 60243-1
Comparative tracking index	300 / -	V	IEC 60112
Relative permittivity (100Hz)	4.3 / 16	-	IEC 60250

## Property Data

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Properties	Typical Data	Unit	Test Method
Relative permittivity (1 MHz)	4 / 4.7	-	IEC 60250
<b>Other properties</b>	<b>dry / cond</b>		
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1510 / -	kg/m <sup>3</sup>	ISO 1183