

**TECHNICAL DATA SHEET**

# Stanyl® TW200F3

Envalior  
PA46-GF15

**Processing**

Injection molding

**Delivery Form**

Pellets

**Special Characteristics**

Platable, Heat stabilized or stable to heat

## Product Text

**Product Information**

15% Glass Reinforced, Heat Stabilized

ISO 1043 PA46-GF15

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.

Processing/Physical Characteristics	Value	Unit	Standard
Molding shrinkage, parallel	0.5	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2	%	ISO 294-4, 2577
Density of melt	1100	kg/m <sup>3</sup>	
Thermal conductivity of melt	0.267	W/(m K)	
Spec. heat capacity of melt	2540	J/(kg K)	
Eff. thermal diffusivity	9.37E-8	m <sup>2</sup> /s	
Mechanical Properties	Value	Unit	Standard
Tensile modulus	6100	MPa	ISO 527
Stress at break	140	MPa	ISO 527
Strain at break	3.5	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	50	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	45	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	6	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	6	kJ/m <sup>2</sup>	ISO 179/1eA

# Stanyl® TW200F3

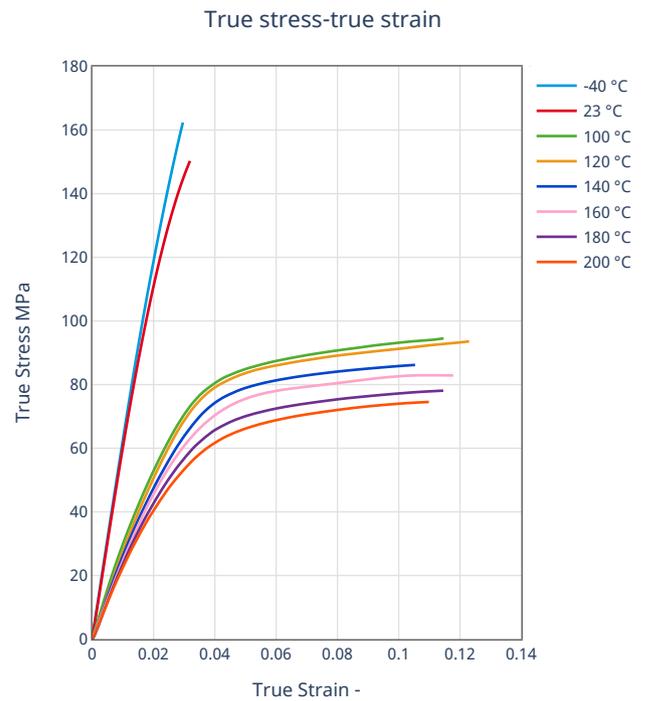
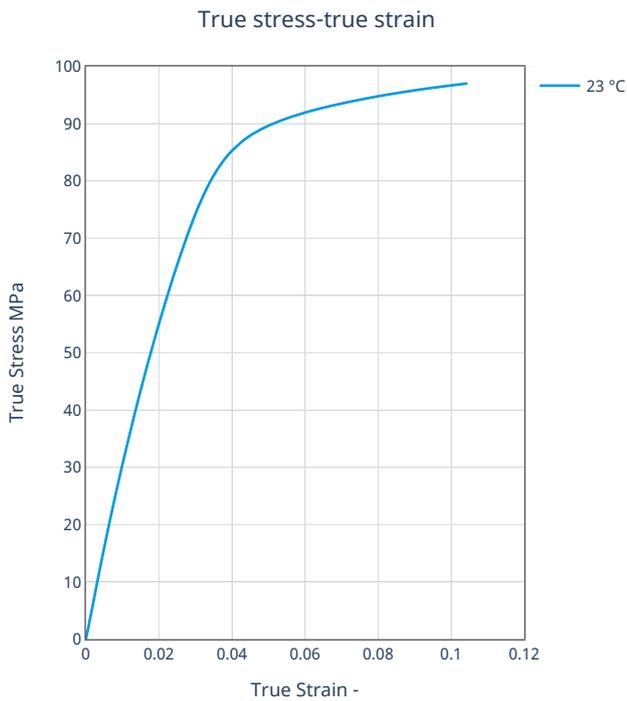
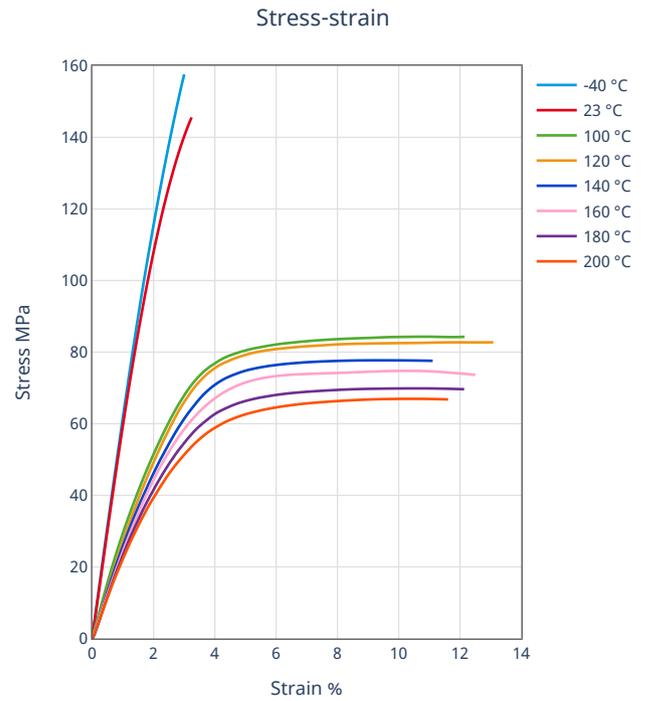
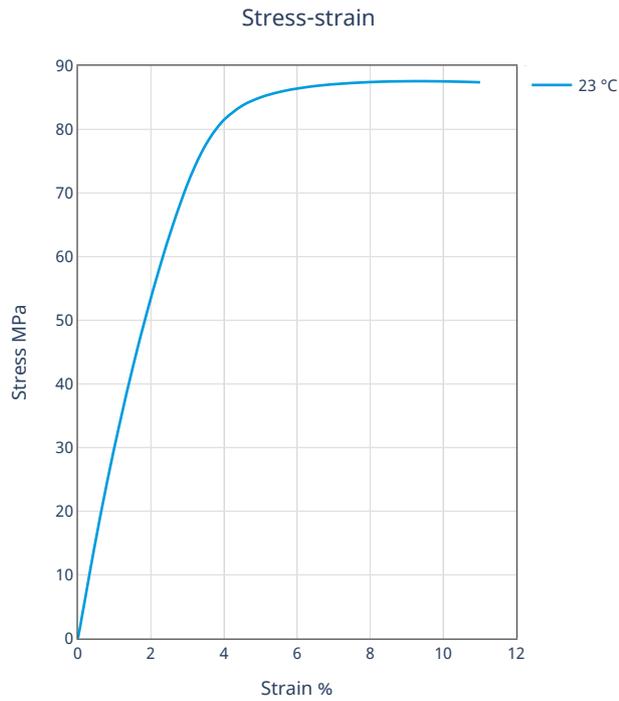
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Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	295	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	75	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	275	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	290	°C	ISO 75-1/-2
Vicat softening temperature, B	290	°C	ISO 306
Coeff. of linear therm. expansion, parallel	50	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	80	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	
Yellow card available	yes		
Electrical Properties	Value	Unit	Standard
Volume resistivity	1E12	Ohm*m	IEC 62631-3-1
Surface resistivity	1E13	Ohm	IEC 62631-3-2
Comparative tracking index	400		IEC 60112
Other Properties	Value	Unit	Standard
Water absorption	11.5	%	Sim. to ISO 62
Humidity absorption	3.15	%	Sim. to ISO 62
Density	1290	kg/m <sup>3</sup>	ISO 1183
Material Specific Properties	Value	Unit	Standard
Viscosity number	150	cm <sup>3</sup> /g	ISO 307, 1157, 1628

## Diagrams

# Stanyl® TW200F3

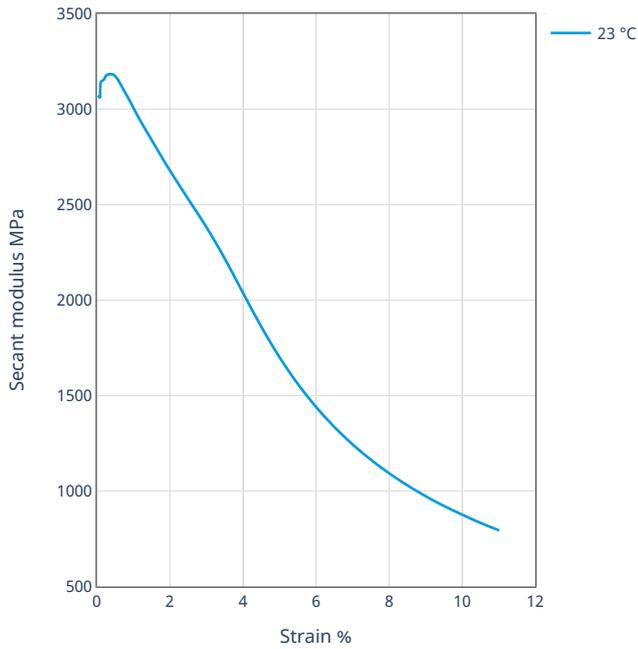
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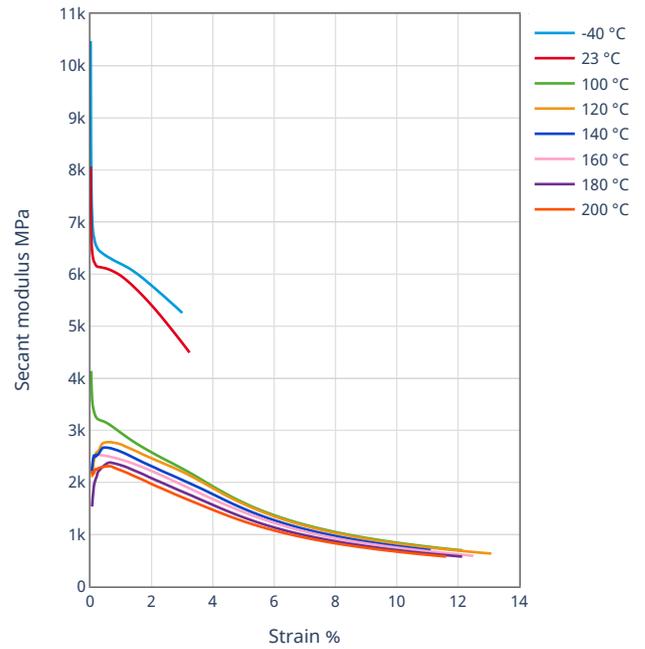
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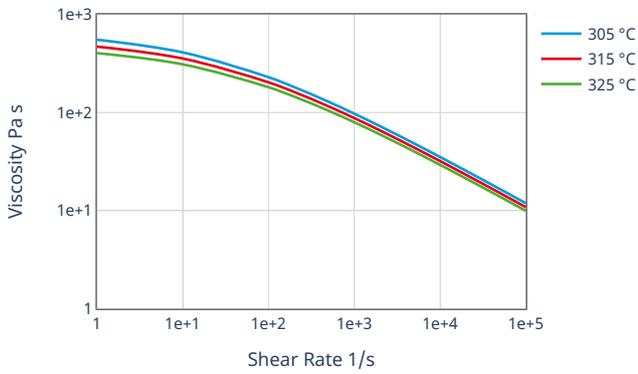
Secant modulus-strain



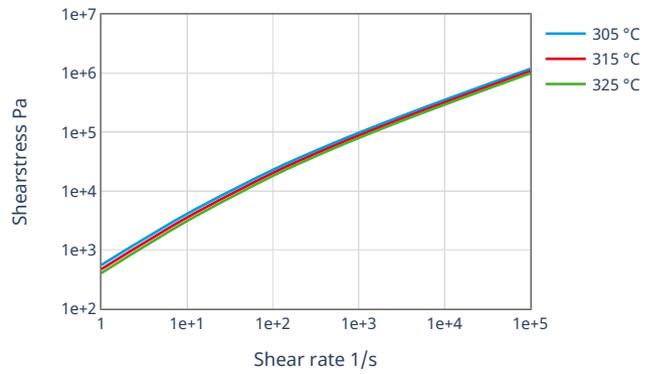
Secant modulus-strain



Viscosity-shear rate

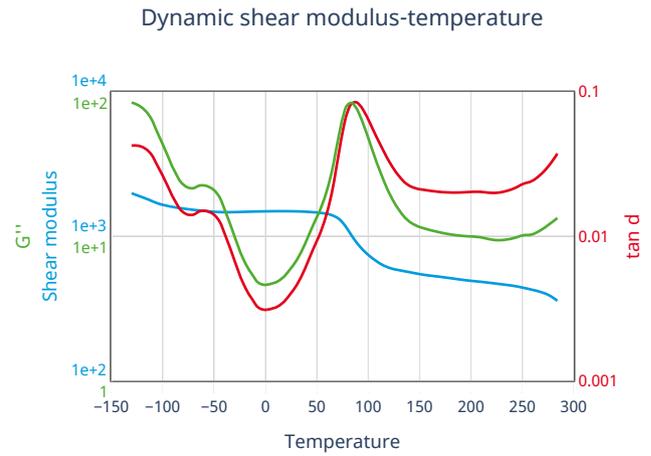
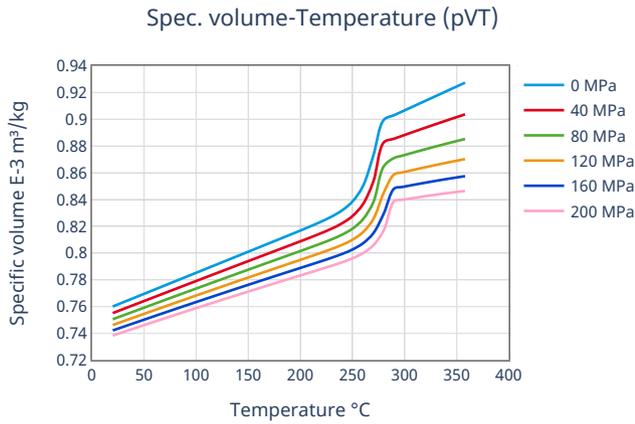


Shearstress-shear rate



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## Processing Information

### Injection molding

Injection Molding Recommendations

Hot runner recommendations for molding high heat performance Engineering Materials

Steel recommendations for molds screws and barrels

Supporting document for Stanyl quality processing

Trouble shooting guideline for injection molding