


**Stanyl® TW241F12**

PA46-GF60

DSM Engineering Plastics

**Product Texts**

60% Glass Reinforced, Heat Stabilized, Good Flow

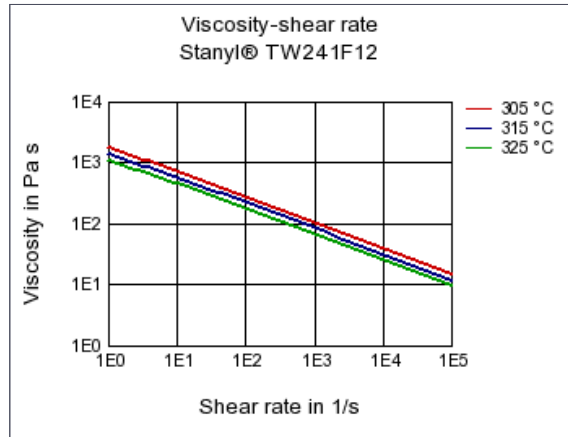
ISO 1043 PA46-GF60

[Stanyl website](#)

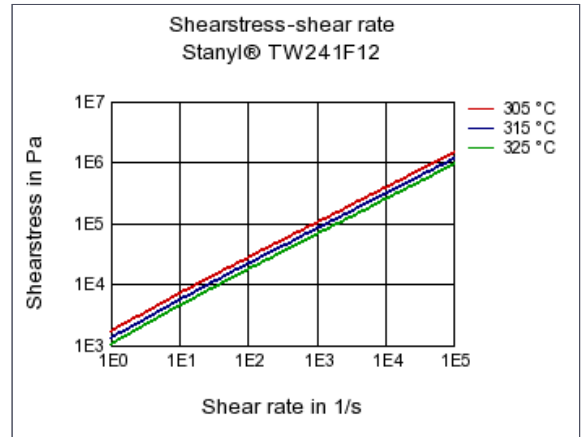
Rheological properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577
<b>Mechanical properties</b>			
<b>ISO Data</b>			
Tensile Modulus	20000 / 12000	MPa	ISO 527-1/-2
Stress at break	255 / 170	MPa	ISO 527-1/-2
Strain at break	2 / 3	%	ISO 527-1/-2
Tensile creep modulus, 1000h	* / 10500	MPa	ISO 899-1
Charpy impact strength (+23°C)	90 / 100	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	65 / 75	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	18 / 18	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	18 / 18	kJ/m <sup>2</sup>	ISO 179/1eA
<b>Thermal properties</b>			
<b>ISO Data</b>			
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)	290 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	290 / *	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	290 / *	°C	ISO 306
Coeff. of linear therm. expansion, parallel	20 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	35 / *	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	IEC 60695-11-10
<b>Other properties</b>			
<b>ISO Data</b>			
Water absorption	5.4 / *	%	Sim. to ISO 62
Humidity absorption	1.4 / *	%	Sim. to ISO 62
Density	1760 / -	kg/m <sup>3</sup>	ISO 1183
<b>Material specific properties</b>			
<b>ISO Data</b>			
Viscosity number	75 / *	cm <sup>3</sup> /g	ISO 307, 1157, 1628
<b>Rheological calculation properties</b>			
<b>ISO Data</b>			
Density of melt	1550	kg/m <sup>3</sup>	-
Thermal conductivity of melt	0.43	W/(m K)	-
Spec. heat capacity of melt	1450	J/(kg K)	-
Eff. thermal diffusivity	1.94E-7	m <sup>2</sup> /s	-

**Diagrams**

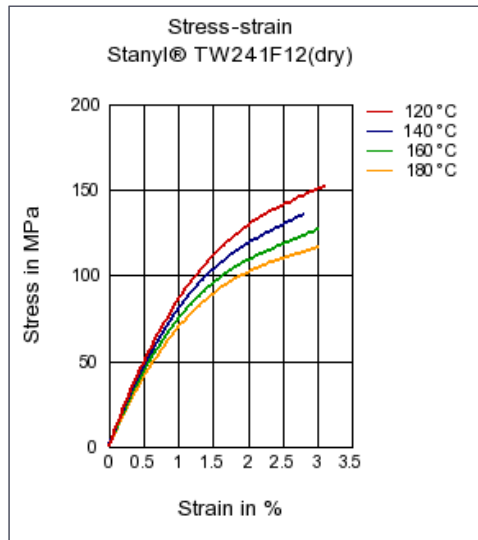
**Viscosity-shear rate**



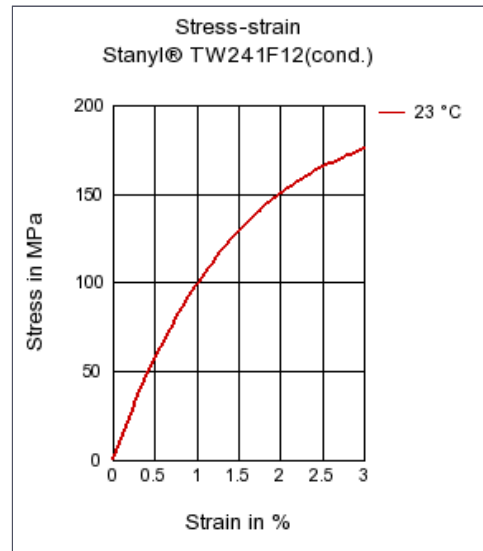
**Shearstress-shear rate**



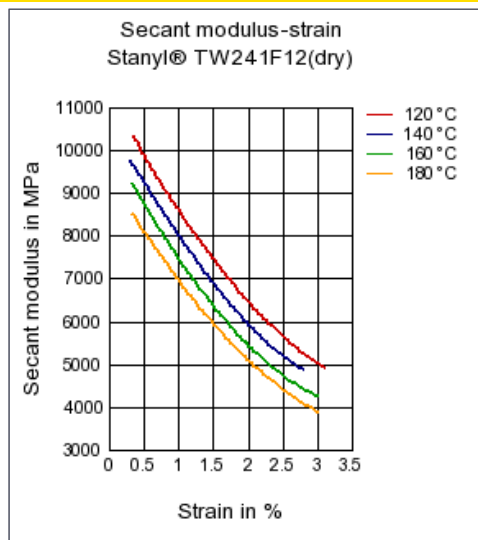
**Stress-strain**



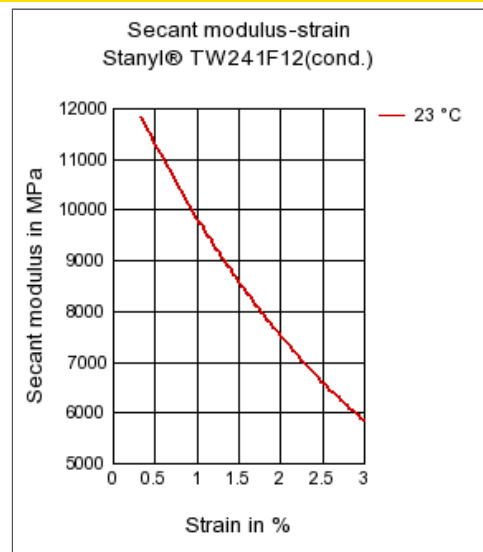
**Stress-strain**



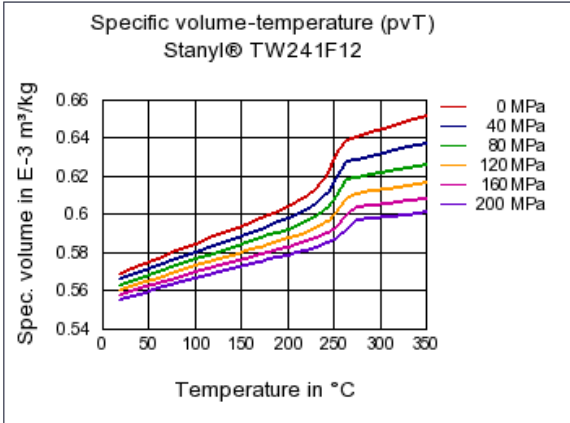
**Secant modulus-strain**



**Secant modulus-strain**



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Special Characteristics

Platable, Heat stabilized or stable to heat

Other text information

Injection Molding

[Injection Molding Recommendations](#)