

**Stanyl® TW200F8**

PA46-GF40

DSM Engineering Plastics

**Product Texts**

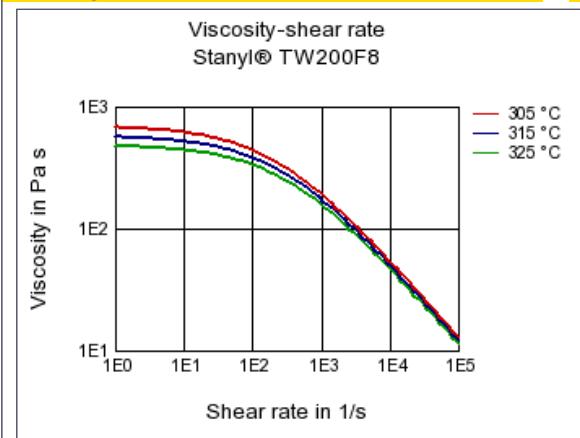
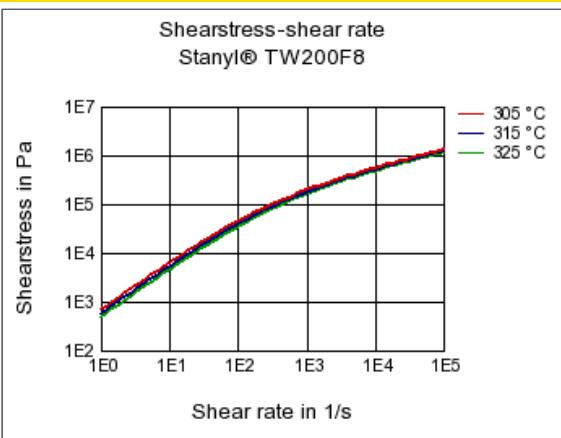
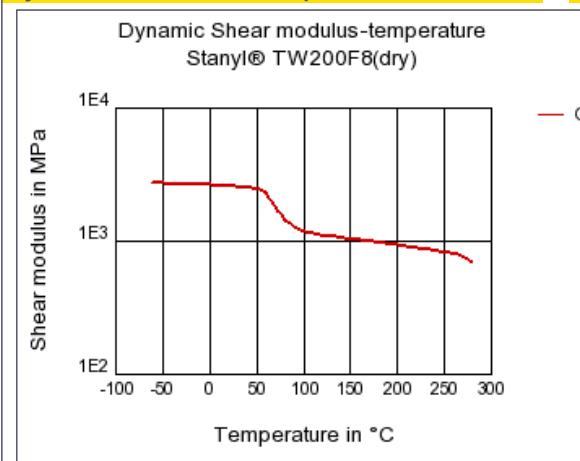
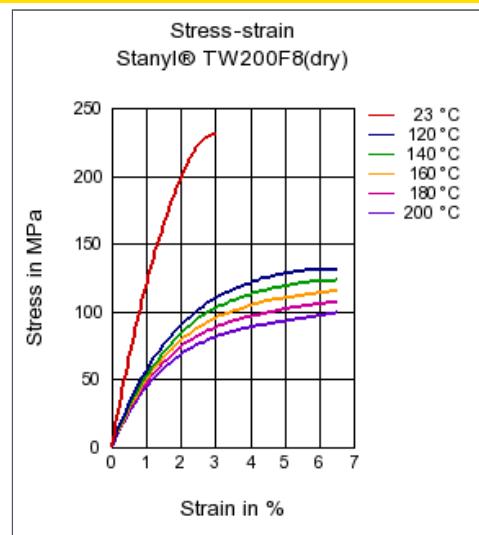
40% Glass Reinforced, Heat Stabilized

ISO 1043 PA46-GF40

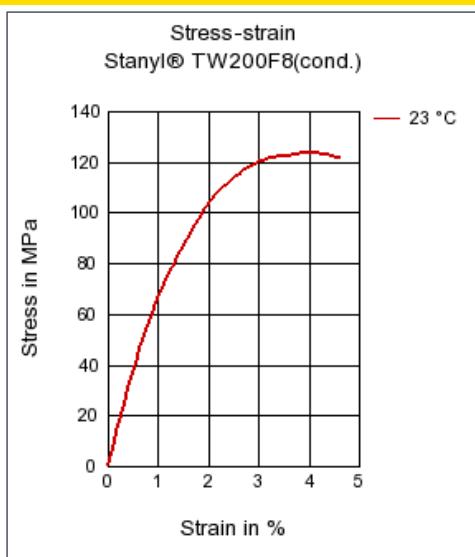
[Stanyl website](#)

<b>Mechanical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
Tensile Modulus	13000 / 8000	MPa	ISO 527-1/-2
Stress at break	230 / 140	MPa	ISO 527-1/-2
Strain at break	3 / 6	%	ISO 527-1/-2
Tensile creep modulus, 1000h	* / 6000	MPa	ISO 899-1
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
<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	25 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	50 / *	E-6/K	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
Oxygen index	22 / *	%	ISO 4589-1/-2
<b>Electrical properties</b>			
<b>ISO Data</b>			
Relative permittivity, 100Hz	4.3 / 16	-	IEC 60250
Relative permittivity, 1MHz	4 / 4.7	-	IEC 60250
Dissipation factor, 100Hz	70 / 6000	E-4	IEC 60250
Dissipation factor, 1MHz	200 / 1000	E-4	IEC 60250
Volume resistivity	1E12 / 1E8	Ohm*m	IEC 60093
Surface resistivity	* / 1E13	Ohm	IEC 60093
Electric strength	30 / 20	kV/mm	IEC 60243-1
Comparative tracking index	300 / -	-	IEC 60112
<b>Other properties</b>			
<b>ISO Data</b>			
Water absorption	8.1 / *	%	Sim. to ISO 62
Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1510 / -	kg/m <sup>3</sup>	ISO 1183
<b>Material specific properties</b>			
<b>ISO Data</b>			
Viscosity number	145 / *	cm <sup>3</sup> /g	ISO 307, 1157, 1628

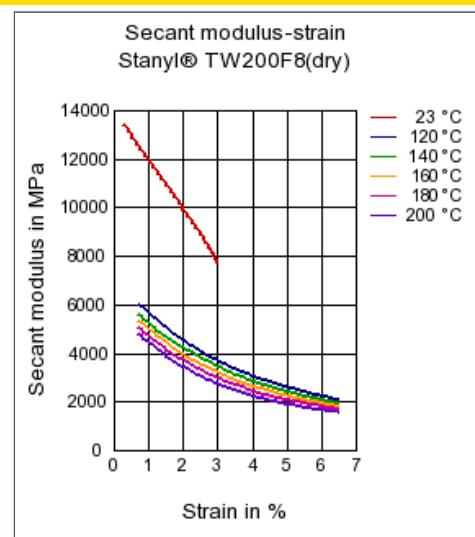
Rheological calculation properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Density of melt	1320	kg/m <sup>3</sup>	-
Thermal conductivity of melt	0.344	W/(m K)	-
Spec. heat capacity of melt	1930	J/(kg K)	-
Eff. thermal diffusivity	1.36E-7	m <sup>2</sup> /s	-

**Diagrams****Viscosity-shear rate****Shearstress-shear rate****Dynamic Shear modulus-temperature****Stress-strain**

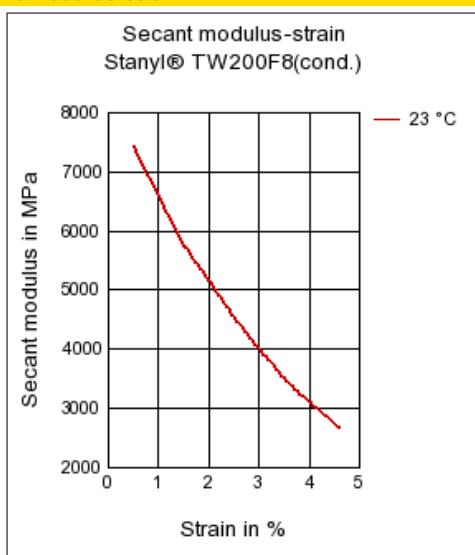
## Stress-strain



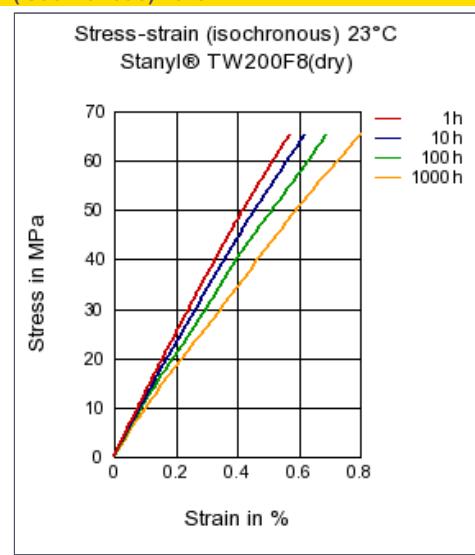
## Secant modulus-strain



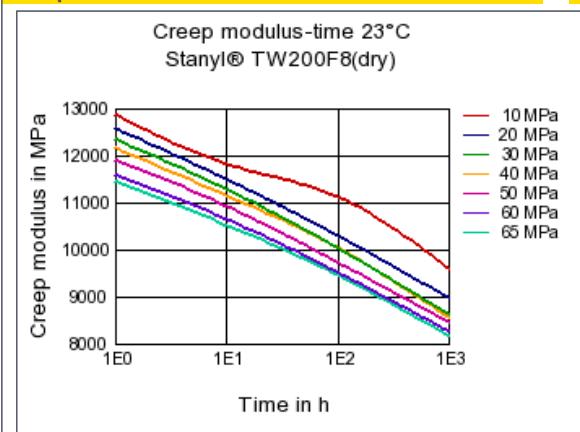
## Secant modulus-strain



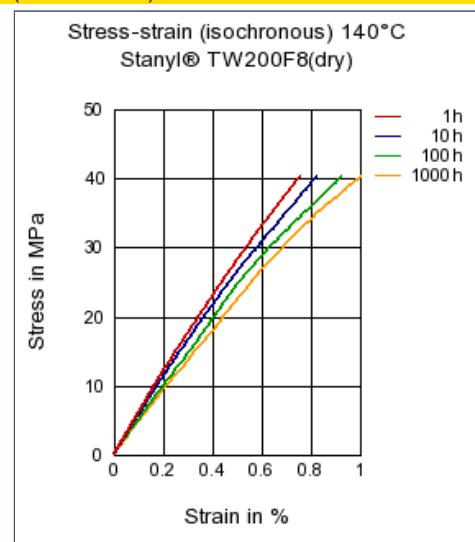
## Stress-strain (isochronous) 23°C



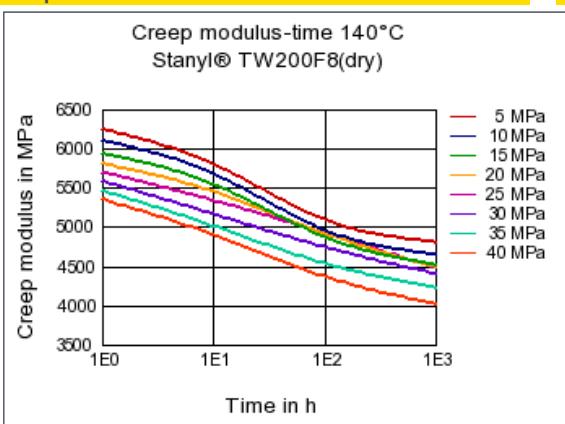
## Creep modulus-time 23°C



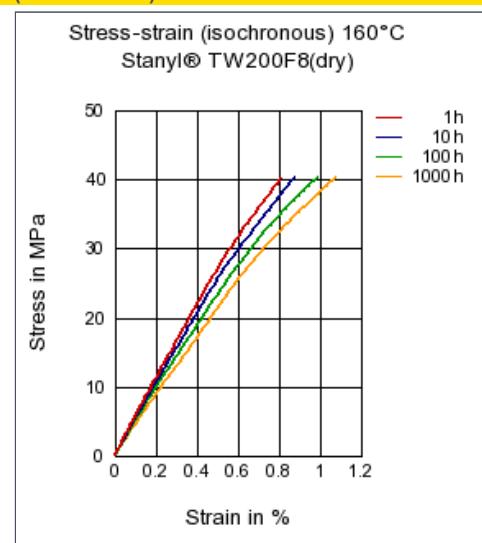
## Stress-strain (isochronous) 140°C



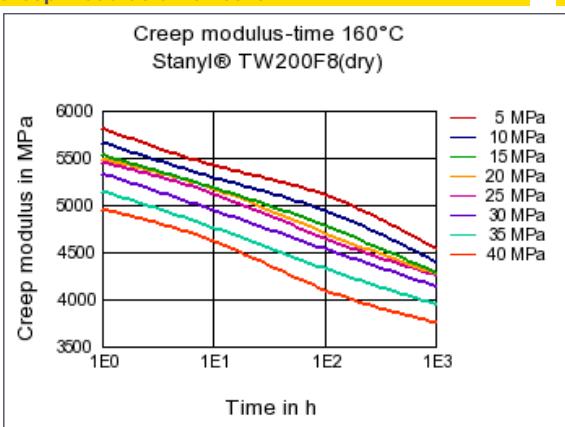
## Creep modulus-time 140°C



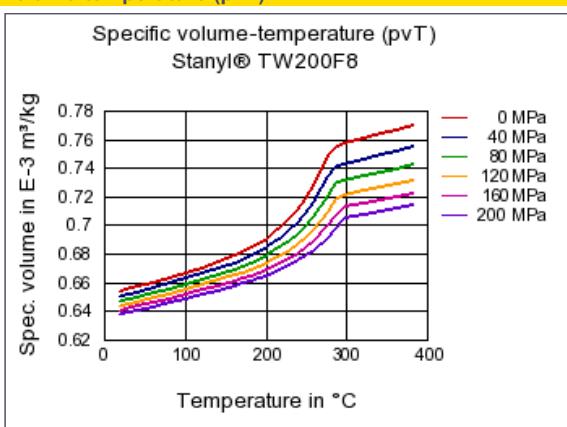
## Stress-strain (isochronous) 160°C



## Creep modulus-time 160°C



## Specific volume-temperature (pvT)



## Characteristics

## Processing

Injection Molding

## Special Characteristics

Platable, Heat stabilized or stable to heat

## Delivery form

Pellets

## Other text information

## Injection Molding

[Injection Molding Recommendations](#)