

Stanyl® TE250F9

PA46-GF45 FR(17)

DSM Engineering Plastics

Product Texts

45% Glass Reinforced, Heat Stabilized, Flame Retardant

ISO 1043 PA46-GF45 FR(17)

[Stanyl website](#)**Mechanical properties**

dry / cond

Unit

Test Standard

ISO Data

Tensile Modulus	17000 / 12000	MPa	ISO 527-1/-2
Stress at break	200 / 130	MPa	ISO 527-1/-2
Strain at break	2 / 3	%	ISO 527-1/-2
Tensile creep modulus, 1000h	* / 12000	MPa	ISO 899-1
Charpy impact strength (+23°C)	65 / 75	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	50 / 50	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	13 / 15	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	13 / 13	kJ/m ²	ISO 179/1eA

Thermal properties

dry / cond

Unit

Test Standard

ISO Data

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	45 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Burning behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Oxygen index	37 / *	%	ISO 4589-1/-2

Electrical properties

dry / cond

Unit

Test Standard

ISO Data

Relative permittivity, 100Hz	4.3 / 12	-	IEC 60250
Relative permittivity, 1MHz	4 / 4.5	-	IEC 60250
Dissipation factor, 100Hz	60 / 3300	E-4	IEC 60250
Dissipation factor, 1MHz	160 / 700	E-4	IEC 60250
Volume resistivity	1E13 / 1E8	Ohm*m	IEC 60093
Surface resistivity	* / 1E14	Ohm	IEC 60093
Electric strength	30 / 20	kV/mm	IEC 60243-1
Comparative tracking index	250 / -	-	IEC 60112

Other properties

dry / cond

Unit

Test Standard

ISO Data

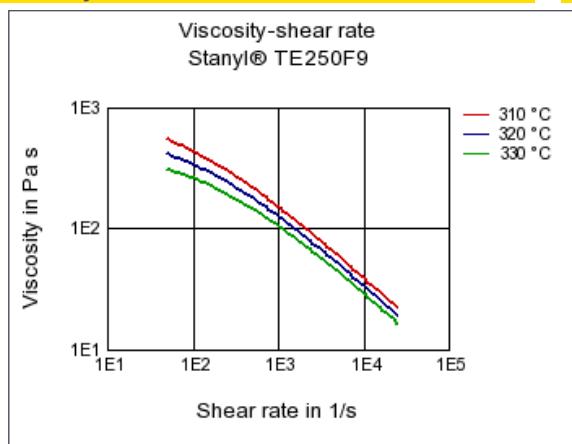
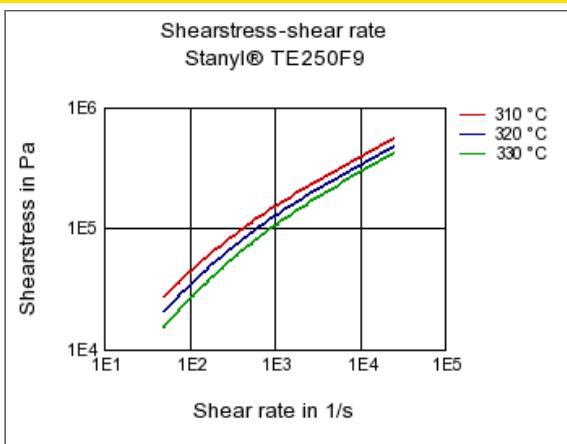
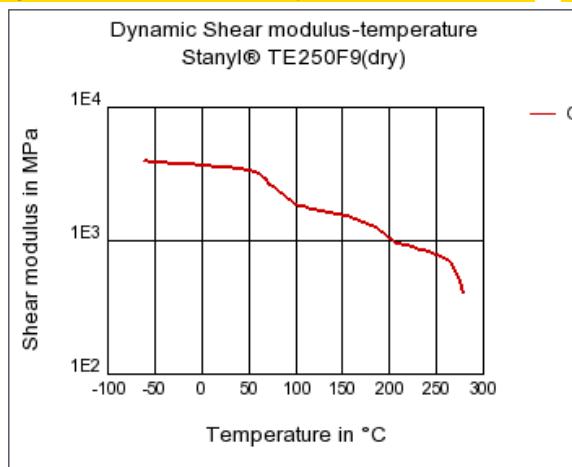
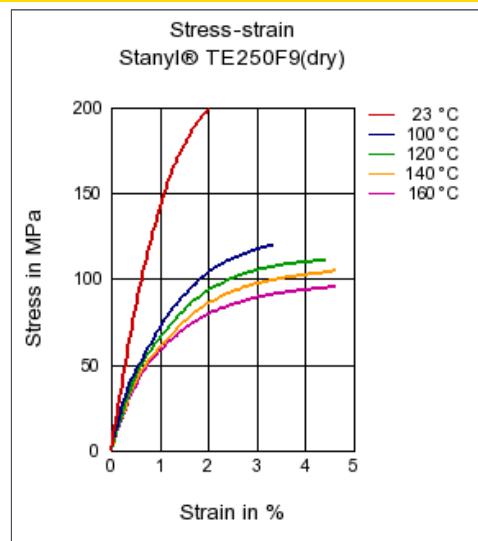
Water absorption	4.8 / *	%	Sim. to ISO 62
Humidity absorption	1.3 / *	%	Sim. to ISO 62
Density	1820 / -	kg/m ³	ISO 1183

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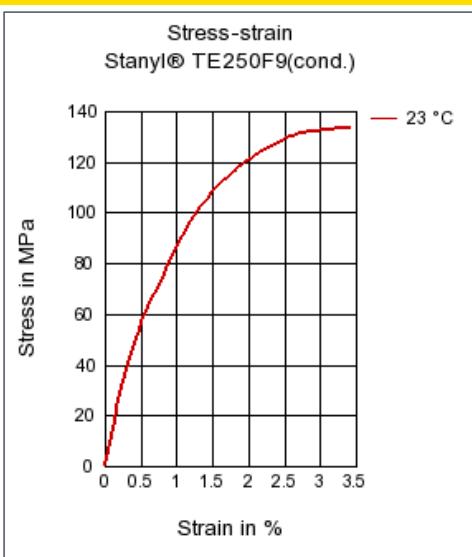
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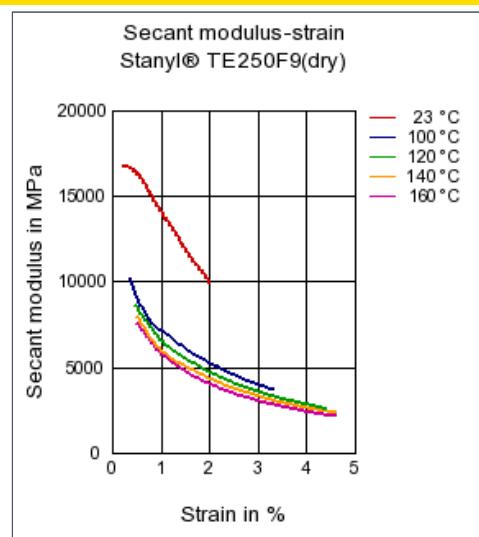
Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	140 / *	cm ³ /g	ISO 307, 1157, 1628
Rheological calculation properties			
ISO Data			
Density of melt	1710	kg/m ³	-
Thermal conductivity of melt	0.344	W/(m K)	-
Spec. heat capacity of melt	1530	J/(kg K)	-
Eff. thermal diffusivity	1.42E-7	m ² /s	-

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

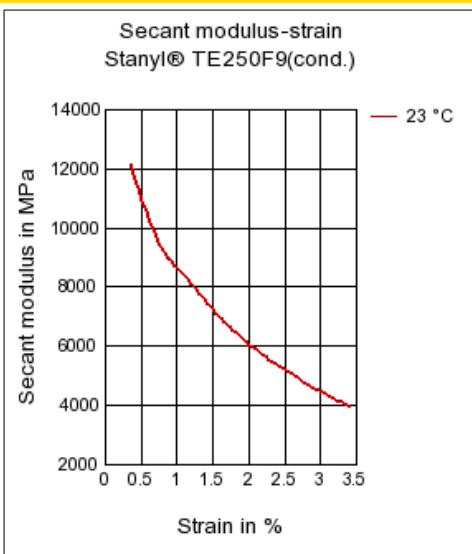
Stress-strain



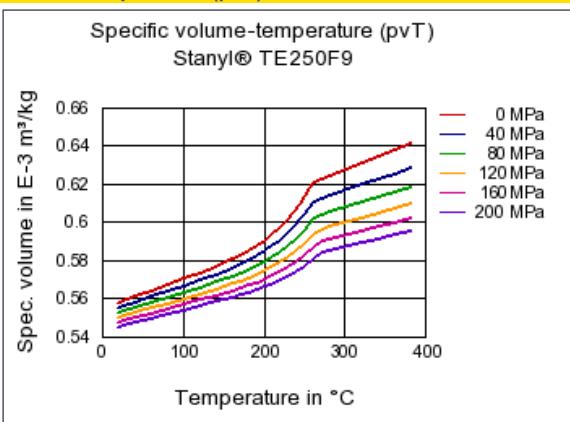
Secant modulus-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Additives

Lubricants, Release agent

Delivery form

Pellets

Special Characteristics

Flame retardant, Platable, Heat stabilized or stable to heat

Other text information

Injection Molding

[Injection Molding Recommendations](#)