Stanyl® TE250F8

PA46-GF40 FR(17) — Envalior

Product Texts

40% Glass Reinforced, Heat Stabilized, Flame Retardant

ISO 1043 PA46-GF40 FR(17)

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	16000 / 10500	MPa	ISO 527
Stress at break	190 / 120	MPa	ISO 527
Strain at break	1.9 / 2.7	%	ISO 527
Charpy impact strength, +23°C	50 / 50	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	40 / 40	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	13 / 13	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	13 / 13	kJ/m²	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	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.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
Burning behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	-
Yellow Card available	yes / *	-	-
Oxygen index	37 / *	%	ISO 4589-1/-2

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.3 / 12	-	IEC 62631-2-1
Relative permittivity, 1MHz	4 / 4.5	-	IEC 62631-2-1
Dissipation factor, 100Hz	60 / 3300	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	160 / 700	E-4	IEC 62631-2-1
Volume resistivity	1E13 / 1E8	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	30 / 20	kV/mm	IEC 60243-1
Comparative tracking index	325 / -	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	4.6 / *	%	Sim. to ISO 62
Humidity absorption	1.3 / *	%	Sim. to ISO 62
Density	1760 / -	kg/m³	ISO 1183

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	150 / *	cm³/g	ISO 307, 1157, 1628

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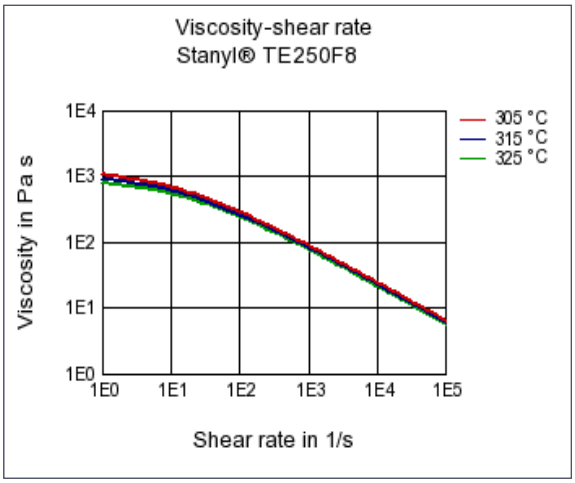
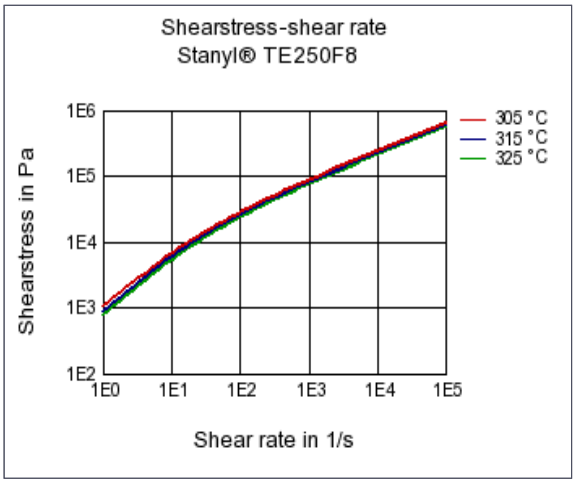
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1570	kg/m³	-
Thermal conductivity of melt	0.353	W/(m K)	-
Spec. heat capacity of melt	1630	J/(kg K)	-
Eff. thermal diffusivity	1.41E-7	m²/s	-

Diagrams

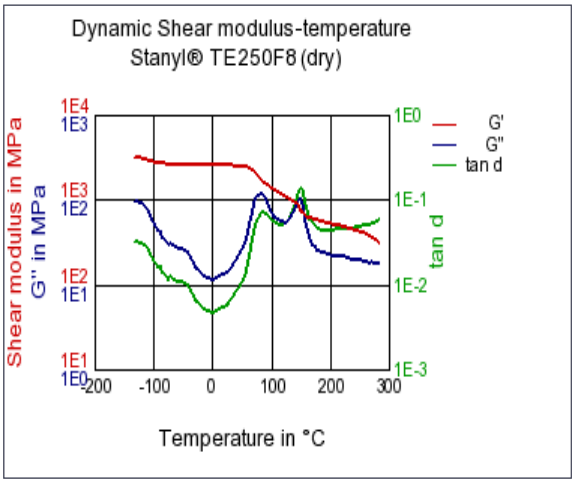
Viscosity-shear rate



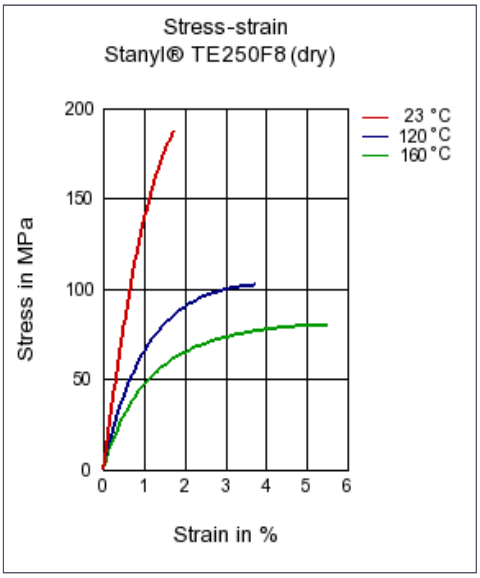
Shearstress-shear rate



Dynamic Shear modulus-temperature



Stress-strain



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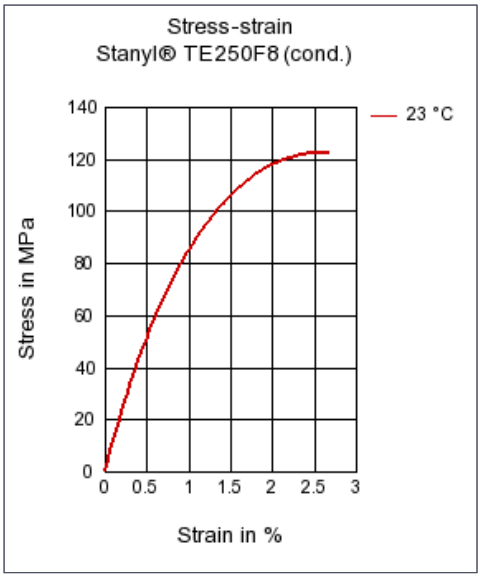
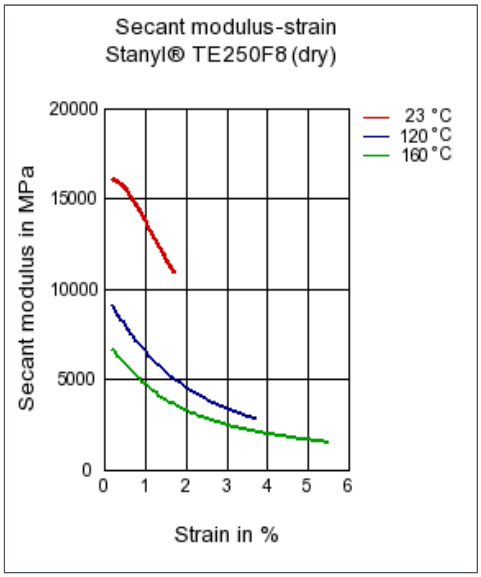
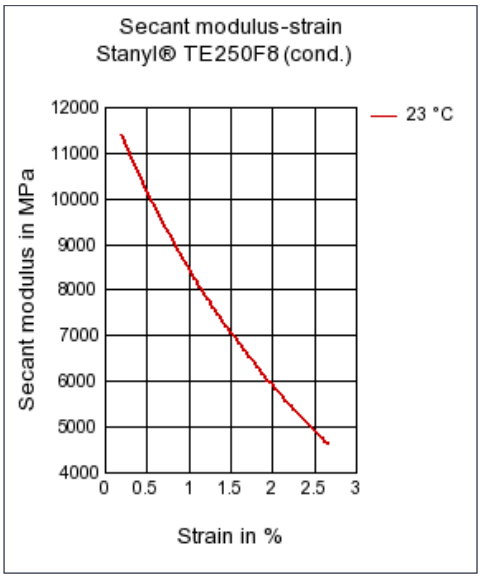
Stress-strain



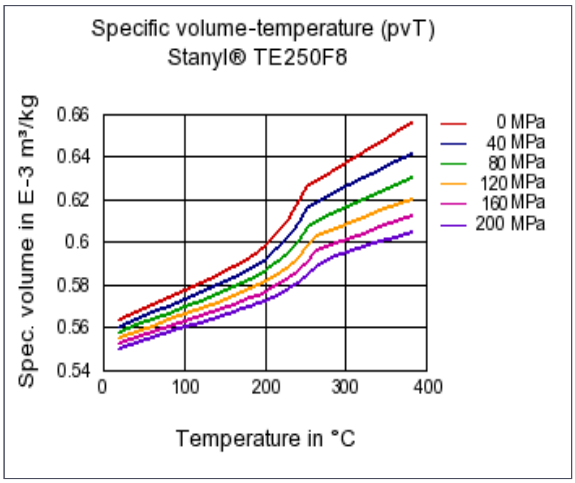
Secant modulus-strain



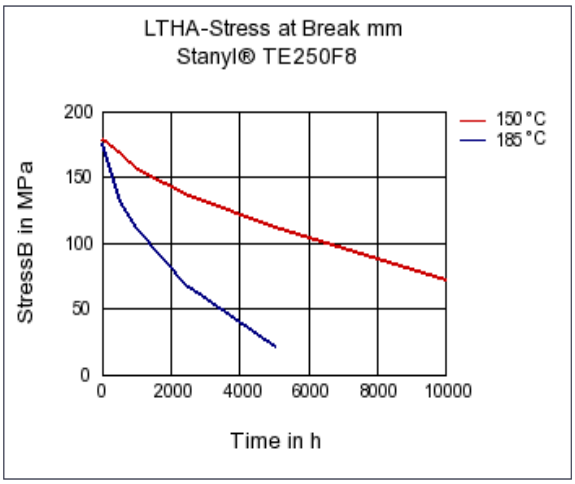
Secant modulus-strain



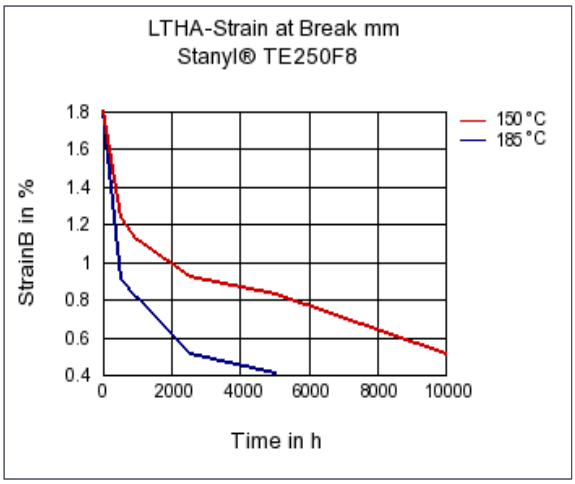
Specific volume-temperature (pvT)



LTHA-Stress at Break mm



LTHA-Strain at Break mm



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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
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

Chemical Media Resistance

Alcohols

- Ethanol (23°C)

Hydrocarbons

- Toluene (23°C)

Ketones

- Acetone (23°C)

Ethers

- Diethyl ether (23°C)

Other

- Ethyl Acetate (23°C)
- Water (23°C)