

TECHNICAL DATA SHEET

Stanyl® 46HF4530

Envalior
PA46-GF30

Processing

Injection molding

Additives

Lubricants, Release agent

Special Characteristics

Heat stabilized or stable to heat

Certifications

Food contact

Product Text

Product Information

30% Glass Reinforced, Heat Stabilized, High Flow, for E&E; applications

ISO 1043 PA46-GF30

Mechanical Properties	Value	Unit	Standard
Tensile modulus	10000	MPa	ISO 527
Stress at break	180	MPa	ISO 527
Strain at break	2.5	%	ISO 527
Poisson's ratio	0.35		ISO 527
Tensile creep modulus, 1000h	4800	MPa	ISO 899-1
Charpy impact strength, +23°C	60	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	60	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	10	kJ/m ²	ISO 179/1eA
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	290	°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	25	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	60	E-6/K	ISO 11359-1/-2

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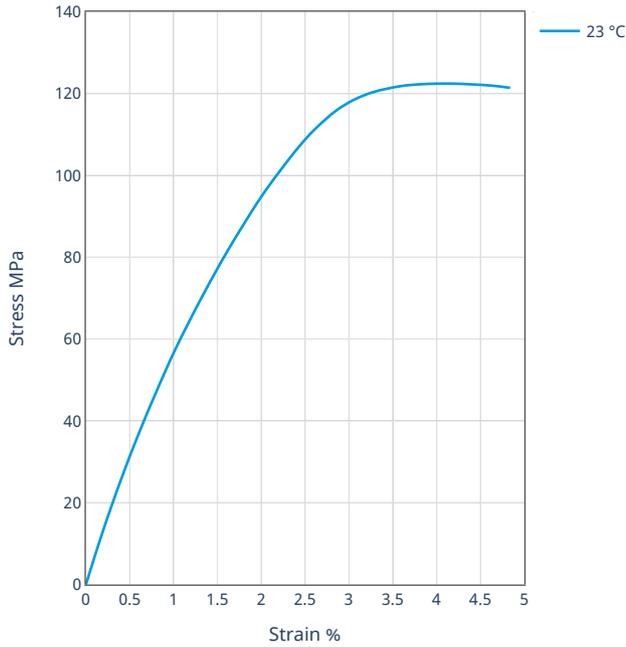
Thermal Properties	Value	Unit	Standard
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	
Yellow card available	yes		
Burning behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	3	mm	
Yellow card available	yes		
Oxygen index	22	%	ISO 4589-1/-2
Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	4.4		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	80	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	230	E-4	IEC 62631-2-1
Volume resistivity	1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Electric strength	30	kV/mm	IEC 60243-1
Comparative tracking index	550		IEC 60112
Other Properties	Value	Unit	Standard
Water absorption	9.5	%	Sim. to ISO 62
Humidity absorption	2.5	%	Sim. to ISO 62
Density	1410	kg/m ³	ISO 1183
Material Specific Properties	Value	Unit	Standard
Viscosity number	95	cm ³ /g	ISO 307, 1157, 1628

Diagrams

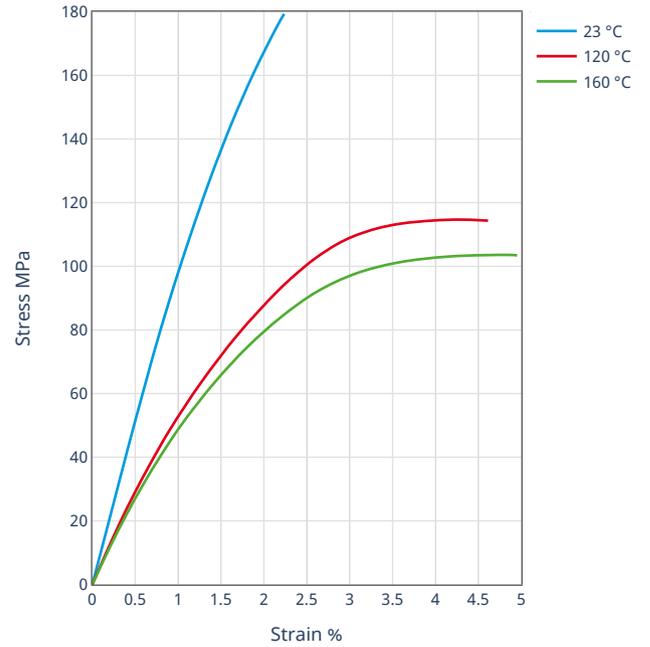
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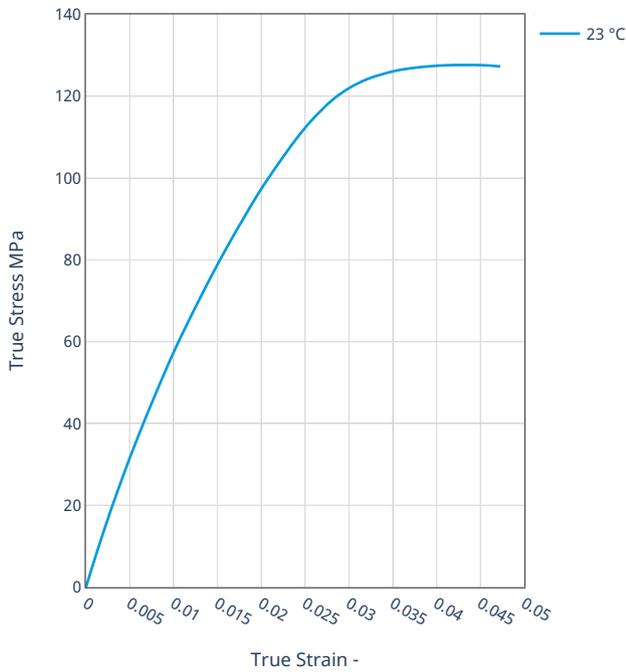
Stress-strain



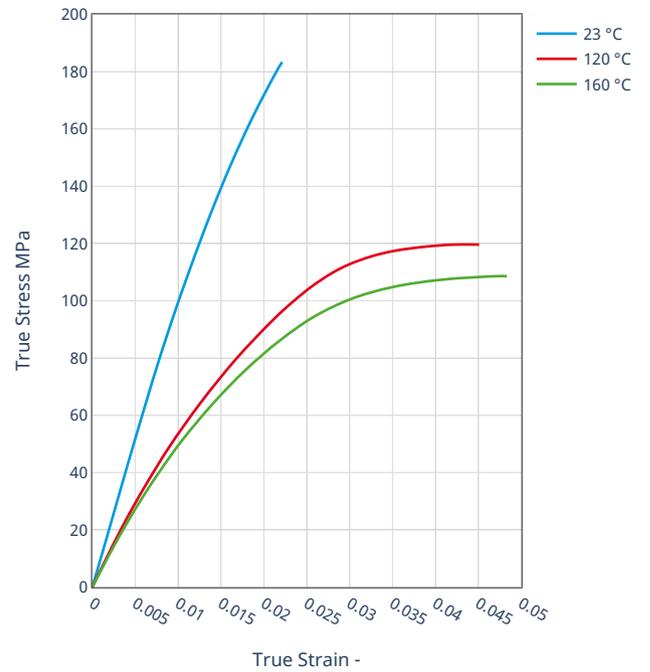
Stress-strain



True stress-true strain



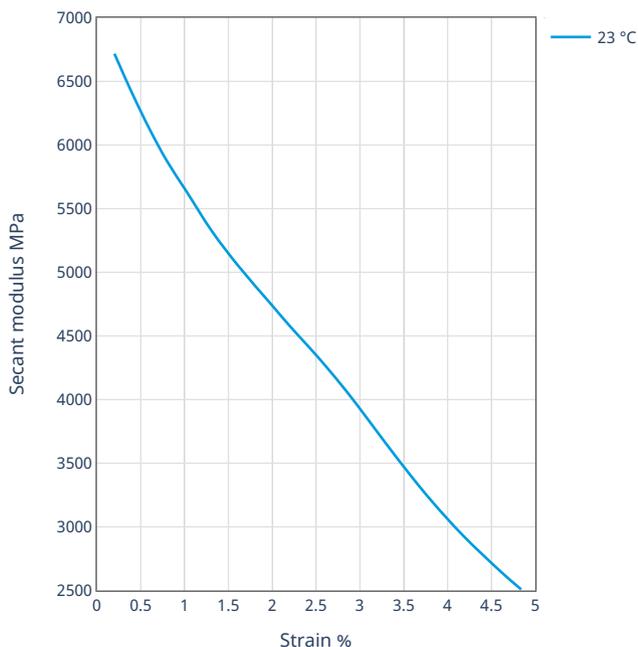
True stress-true strain



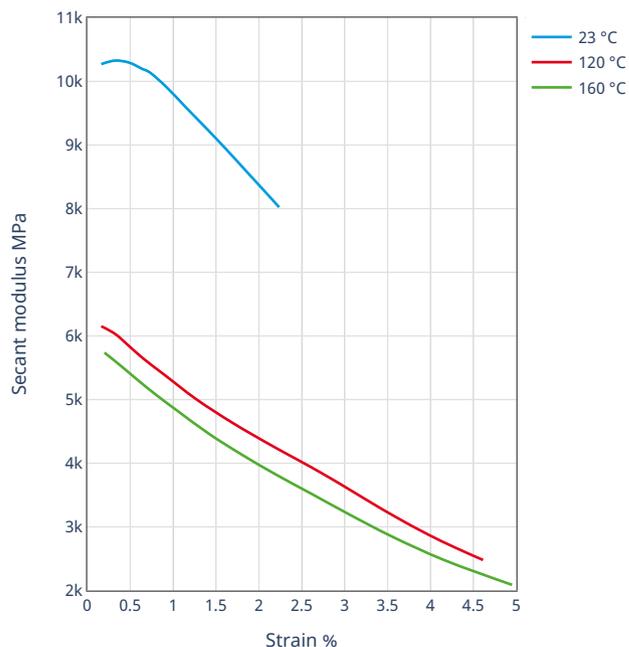
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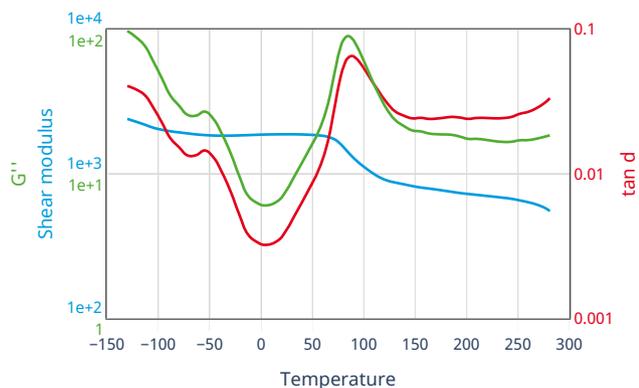
Secant modulus-strain



Secant modulus-strain



Dynamic shear modulus-temperature



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