TECHNICAL DATA SHEET

Stanyl® 46HF5040

Envalior

PA46-GF40 FR(17)

Processing

Injection molding

Additives

Lubricants, Release agent

Delivery Form

Pellets

Special Characteristics

Flame retardant, Platable, Heat stabilized or stable to heat

Product Text

Product Information

40% Glass Reinforced, Heat Stabilized, Flame Retardant, High Flow

ISO 1043 PA46-GF40 FR(17)

Stanyl® 46HF5040 is an electro-friendly & flame-retarded high heat polyamide with unmatched high flow that offers an excellent combination of flame-retardancy and mechanical properties. 46HF-grades are often used in thin-walled and multi-cavity connectors such as DDR-connectors.

Processing/Physical Characteristics	Value	Unit	Standard
Density of melt	1570	kg/m³	
Thermal conductivity of melt	0.335	W/(m K)	
Spec. heat capacity of melt	1550	J/(kg K)	
Eff. thermal diffusivity	1.4E-7	m²/s	

Mechanical Properties	Value	Unit	Standard
Tensile modulus	15000	MPa	ISO 527
Stress at break	190	MPa	ISO 527
Strain at break	1.8	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	50	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	40	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	13	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	14	kJ/m²	ISO 179/1eA

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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	17	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	65	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	mm	
Yellow card available	yes		
Oxygen index	37	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Standard
Relative permittivity, 100Hz	4.3		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	60	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	160	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	325		IEC 60112

Other Properties	Value	Unit	Standard
Water absorption	5.1	%	Sim. to ISO 62
Humidity absorption	1.4	%	Sim. to ISO 62
Density	1770	kg/m³	ISO 1183

Material Specific Properties	Value	Unit	Standard
Viscosity number	80	cm³/g	ISO 307, 1157, 1628

Diagrams

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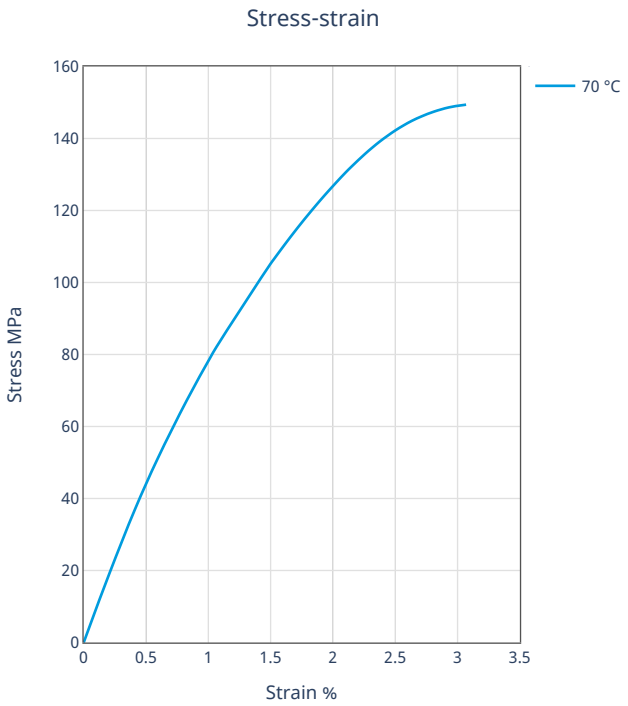

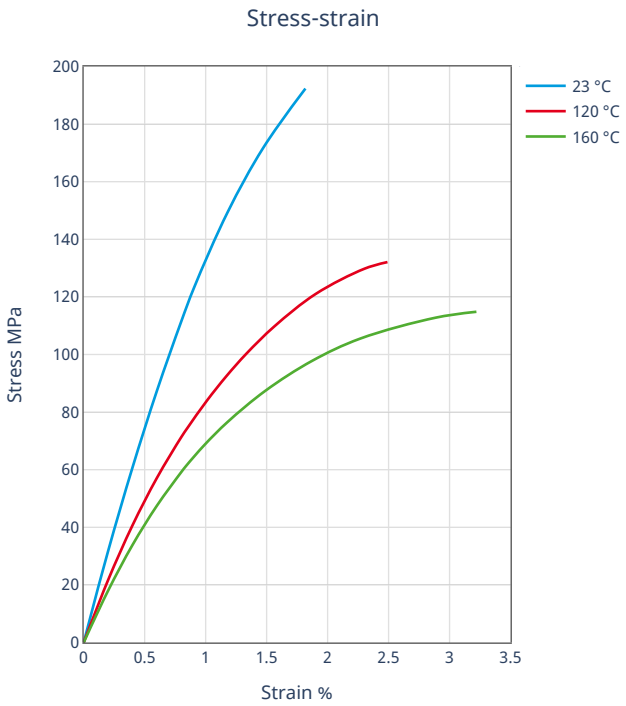

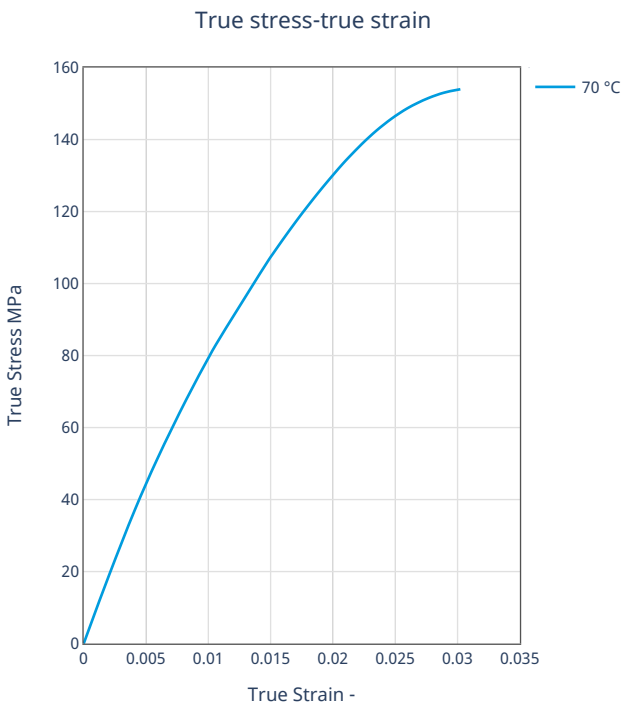

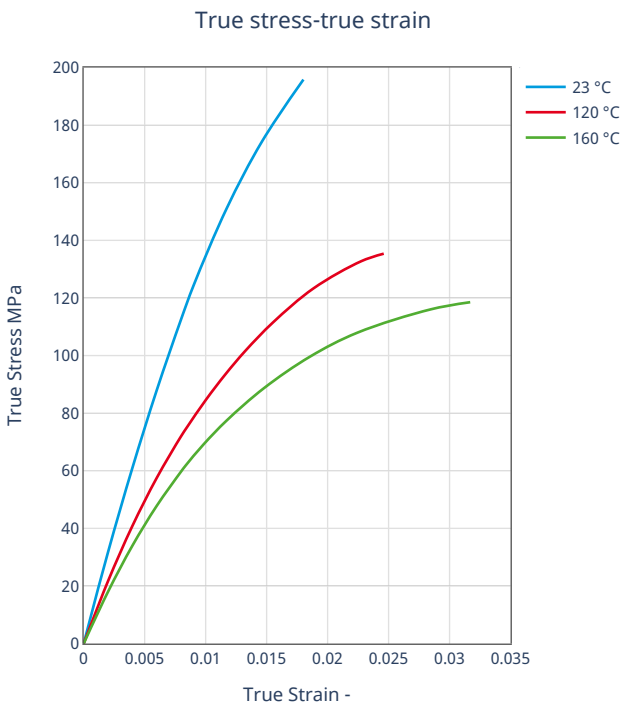

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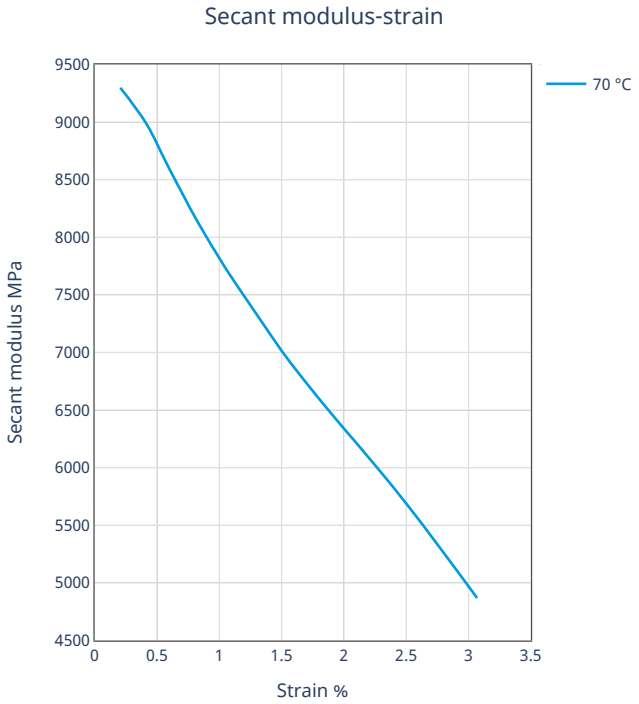

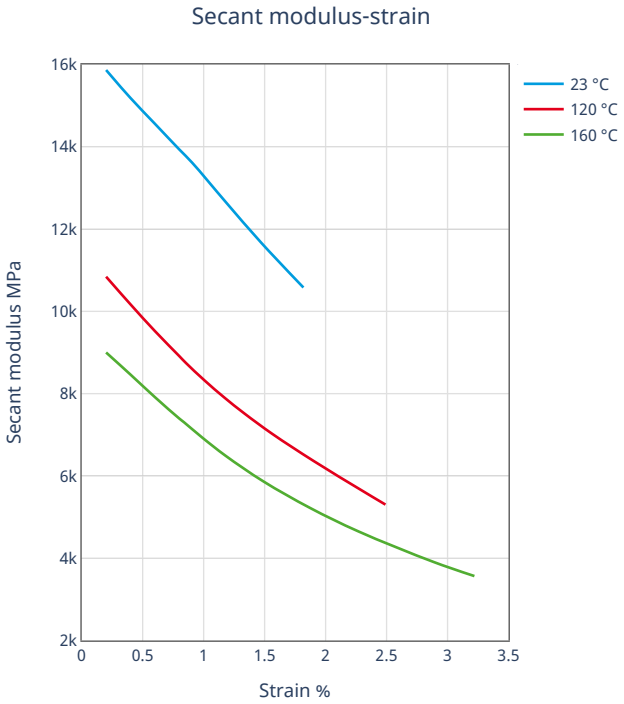

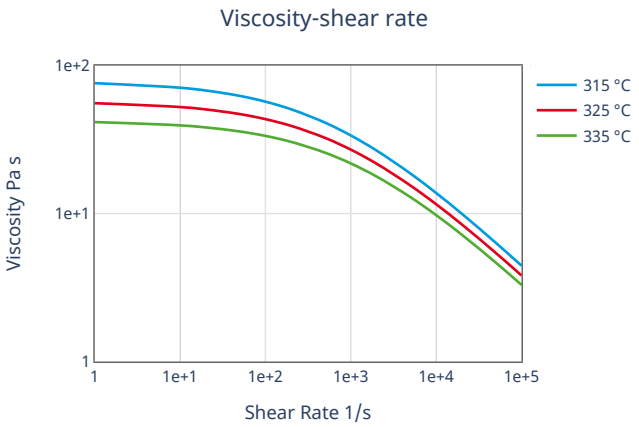

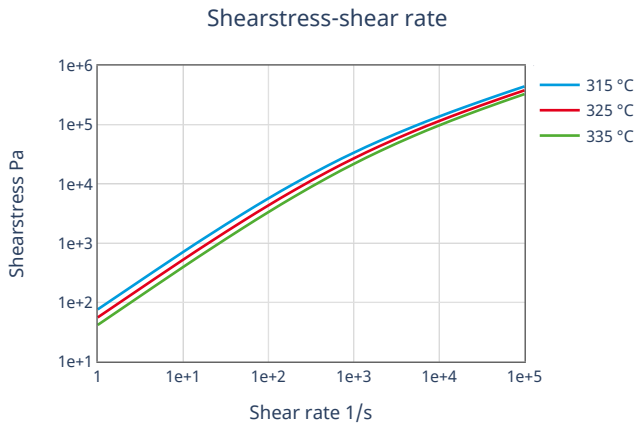

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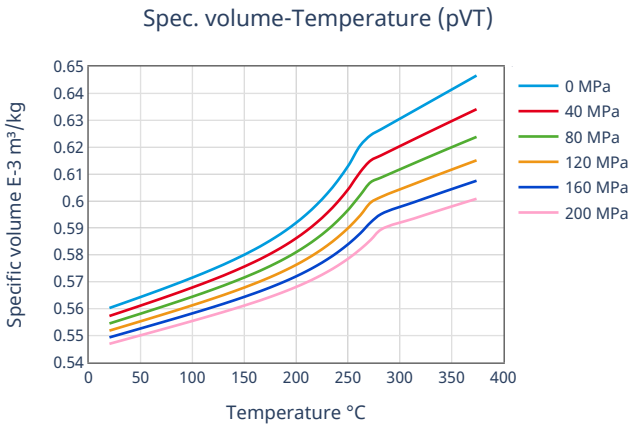

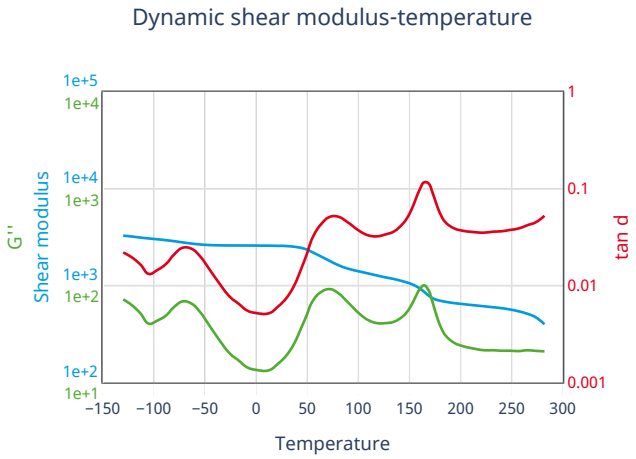

Processing Information

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