

TECHNICAL DATA SHEET

Stanyl® TW242FM10

Envalior
PA46-(GF+MF)50

Processing

Injection molding

Additives

Lubricants

Special Characteristics

Heat stabilized or stable to heat

Product Text

Product Information

50% Glass/Mineral Reinforced, Heat Stabilized

ISO 1043 PA46-(GF+MF)50

Processing/Physical Characteristics	Value	Unit	Standard
Density of melt	1430	kg/m ³	
Thermal conductivity of melt	0.391	W/(m K)	
Spec. heat capacity of melt	1680	J/(kg K)	
Eff. thermal diffusivity	1.64E-7	m ² /s	
Mechanical Properties	Value	Unit	Standard
Tensile modulus	12500	MPa	ISO 527
Stress at break	160	MPa	ISO 527
Strain at break	2	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy notched impact strength, +23°C	5	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	4	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	285	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	290	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	25	E-6/K	ISO 11359-1/-2

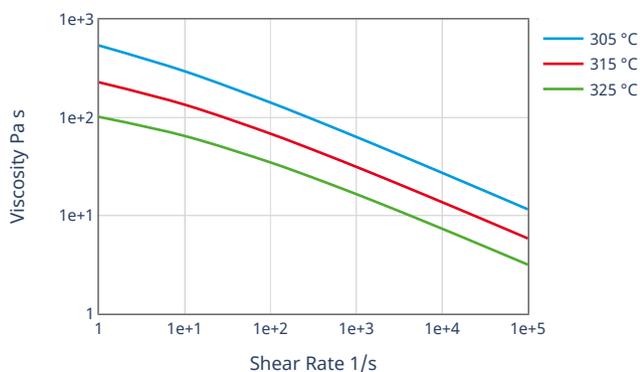
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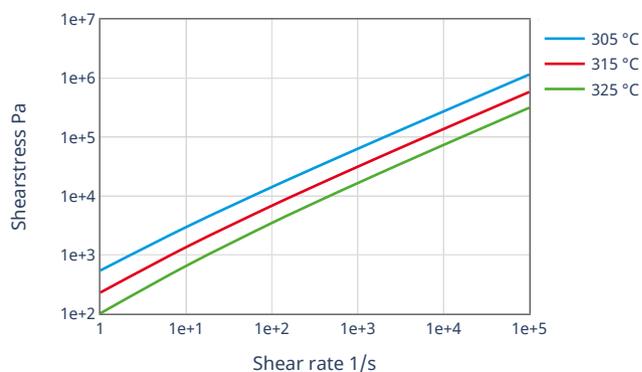
Thermal Properties	Value	Unit	Standard
Coeff. of linear therm. expansion, normal	50	E-6/K	ISO 11359-1/-2
Other Properties	Value	Unit	Standard
Water absorption	6.75	%	Sim. to ISO 62
Humidity absorption	1.8	%	Sim. to ISO 62
Density	1630	kg/m ³	ISO 1183

Diagrams

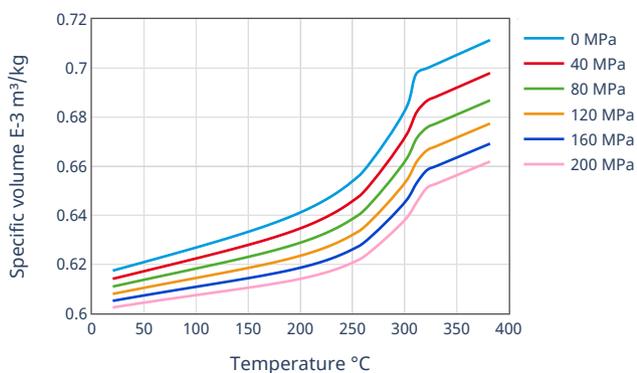
Viscosity-shear rate



Shearstress-shear rate



Spec. volume-Temperature (pVT)



Processing Information

Injection molding

Injection Molding Recommendations

Hot runner recommendations for molding high heat performance Engineering Materials

Steel recommendations for molds screws and barrels

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Supporting document for Stanyl quality processing
Trouble shooting guideline for injection molding