


Stanyl® 46HF5040

PA46-GF40 FR(17)

DSM Engineering Plastics

Product Texts

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

ISO 1043 PA46-GF40 FR(17)

[Stanyl website](#)

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	15000 / 12000	MPa	ISO 527-1/-2
Stress at break	190 / 130	MPa	ISO 527-1/-2
Strain at break	1.7 / 2.5	%	ISO 527-1/-2
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 / 14	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	14 / 14	kJ/m²	ISO 179/1eA
Thermal properties			
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	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	IEC 60695-11-10
UL recognition	UL / *	-	-
Burning behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.2 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Oxygen index	37 / *	%	ISO 4589-1/-2
Electrical properties			
ISO Data			
Relative permittivity, 100Hz	4.3 / -	-	IEC 60250
Relative permittivity, 1MHz	4 / -	-	IEC 60250
Dissipation factor, 100Hz	60 / -	E-4	IEC 60250
Dissipation factor, 1MHz	160 / -	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	325 / -	-	IEC 60112
Other properties			
ISO Data			
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			
ISO Data			

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Viscosity number	80 / *	cm ³ /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

0.335

W/(m K)

-

Spec. heat capacity of melt

1550

J/(kg K)

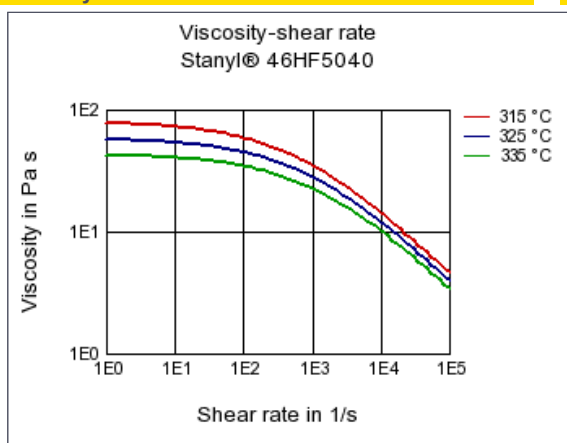
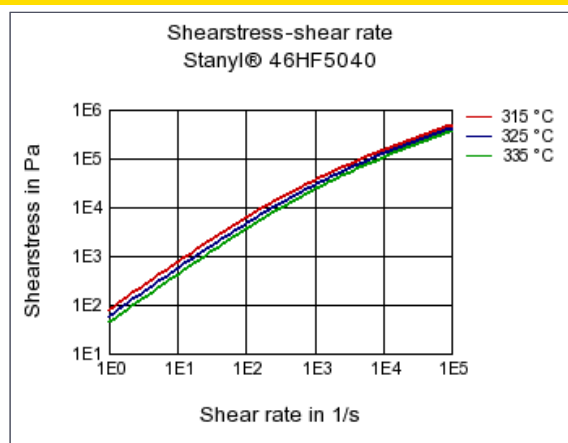
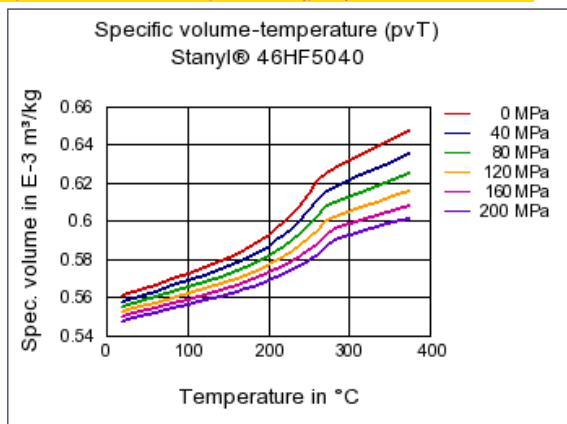
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Eff. thermal diffusivity

1.4E-7

m²/s

-

Diagrams**Viscosity-shear rate****Shearstress-shear rate****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](#)