Stanyl® 46HF4130

PA46-GF30 DSM Engineering Plastics

Product Texts

30% Glass Reinforced, Heat Stabilized, High Flow

ISO 1043 PA46-GF30

Stanyl website

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	10000 / 6000	MPa	ISO 527-1/-2
Stress at break	210 / 115	MPa	ISO 527-1/-2
Strain at break	3 / 6	%	ISO 527-1/-2
Tensile creep modulus, 1000h	* / 4800	MPa	ISO 899-1
Charpy impact strength (+23°C)	60 / 90	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	60 / 60	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	13 / 17	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	12 / 12	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	60 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Burning behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Oxygen index	22 / *	%	ISO 4589-1/-2

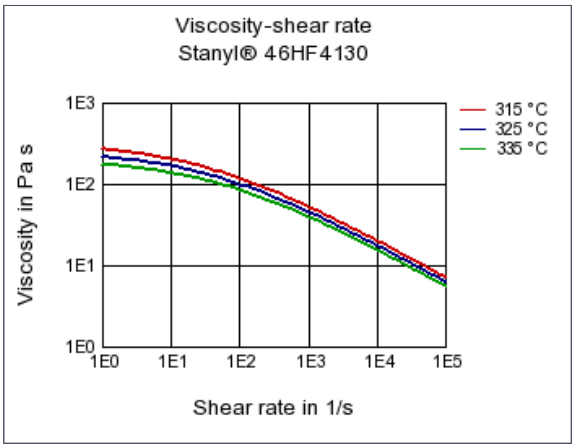
Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	9.5 / *	%	Sim. to ISO 62
Humidity absorption	2.6 / *	%	Sim. to ISO 62
Density	1410 / -	kg/m³	ISO 1183

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	85 / *	cm³/g	ISO 307, 1157, 1628

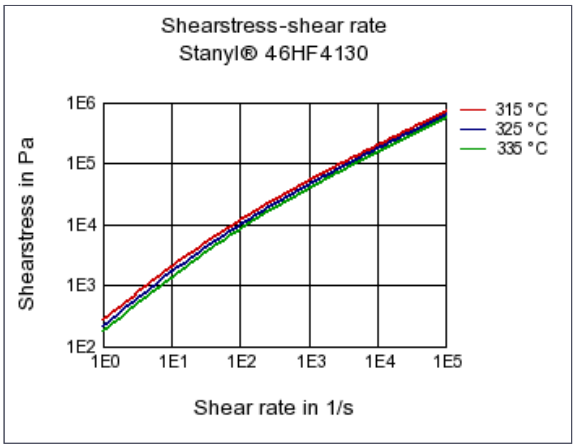
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1190	kg/m³	-
Thermal conductivity of melt	0.367	W/(m K)	-
Spec. heat capacity of melt	2290	J/(kg K)	-
Eff. thermal diffusivity	1.31E-7	m²/s	-

Diagrams

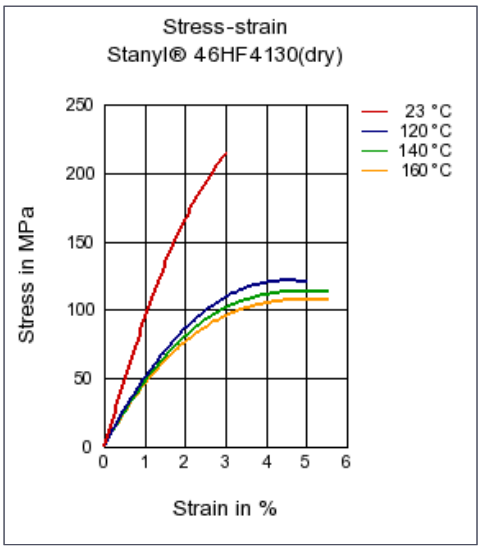
Viscosity-shear rate



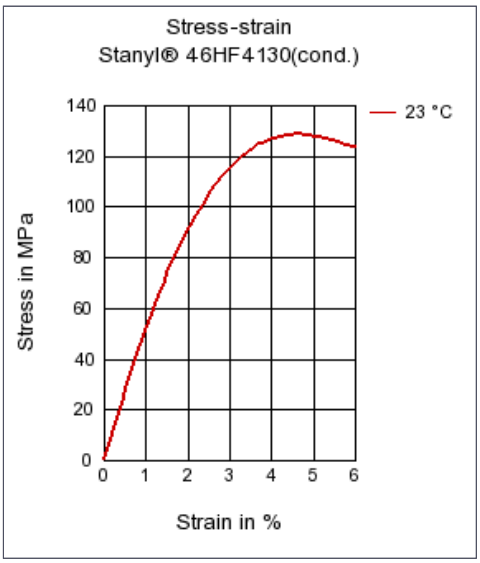
Shearstress-shear rate



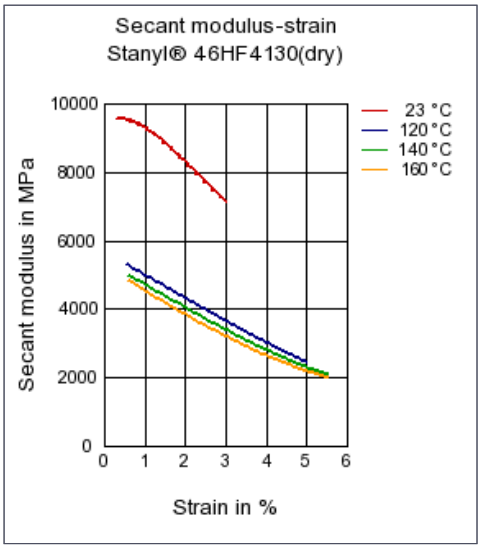
Stress-strain



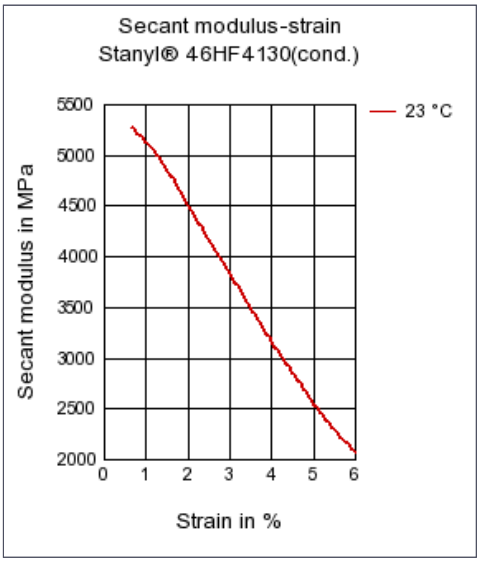
Stress-strain



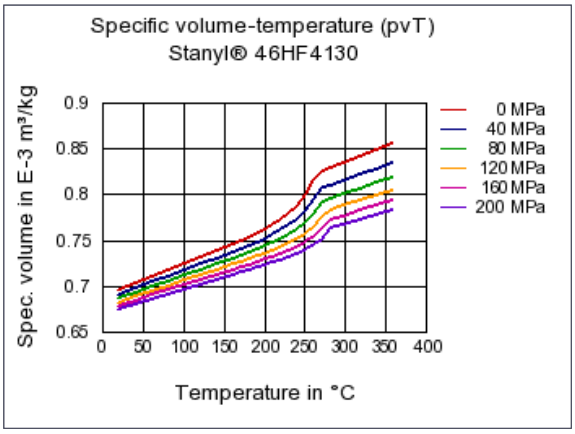
Secant modulus-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Processing
Injection Molding

Special Characteristics
Heat stabilized or stable to heat

Additives
Lubricants, Release agent

Other text information

Injection Molding
Injection Molding Recommendations