



Stanyl® ForTii™ F11			
PA4T-GF30 FR(40)		DSM Engineering Plastics	
Product Texts			
30% Glass Reinforced, Flame Retardant, Halogen free and free of red phosphorous			
ISO 1043 PA4T-GF30 FR(40)			
Rheological properties			
	dry / cond	Unit	Test Standard
ISO Data			
Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2 / *	%	ISO 294-4, 2577
Mechanical properties			
	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	12000 / 12000	MPa	ISO 527-1/-2
Stress at break	155 / 155	MPa	ISO 527-1/-2
Strain at break	2 / 2	%	ISO 527-1/-2
Charpy impact strength (+23°C)	50 / 50	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 10	kJ/m ²	ISO 179/1eA
Thermal properties			
	dry / cond	Unit	Test Standard
ISO Data			
Melting temperature (10°C/min)	325 / *	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	125 / *	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	305 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	323 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	15 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	70 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-0 / *	class	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	39 / *	%	ISO 4589-1/-2
Electrical properties			
	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.2 / 4.2	-	IEC 60250
Relative permittivity, 1MHz	3.9 / 3.9	-	IEC 60250
Dissipation factor, 100Hz	64 / 64	E-4	IEC 60250
Dissipation factor, 1MHz	176 / 176	E-4	IEC 60250
Volume resistivity	>1E13 / >1E13	Ohm*m	IEC 60093
Surface resistivity	* / >1E15	Ohm	IEC 60093
Electric strength	33 / 33	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112
Other properties			
	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	4.6 / *	%	Sim. to ISO 62
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1460 / -	kg/m ³	ISO 1183
Material specific properties			
	dry / cond	Unit	Test Standard
ISO Data			

Viscosity number

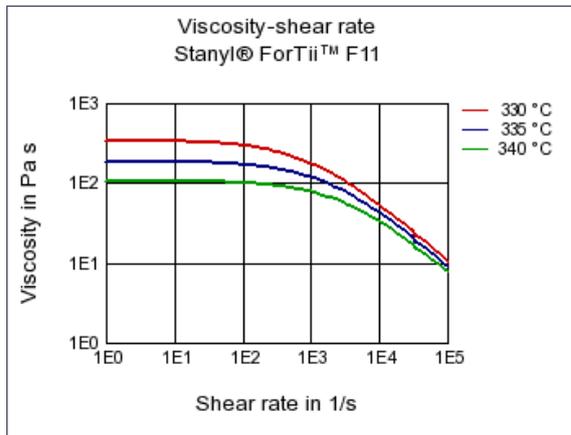
86 / *

cm³/g

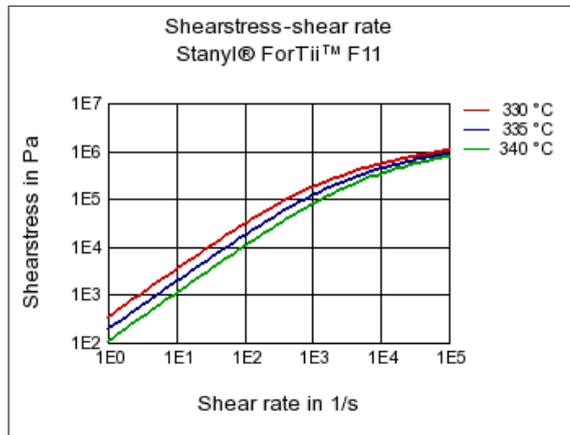
ISO 307, 1157, 1628

Diagrams

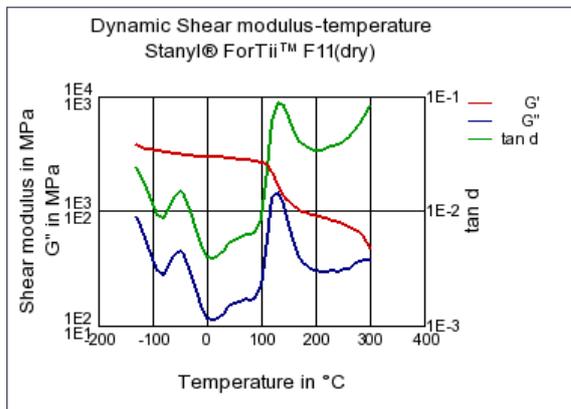
Viscosity-shear rate



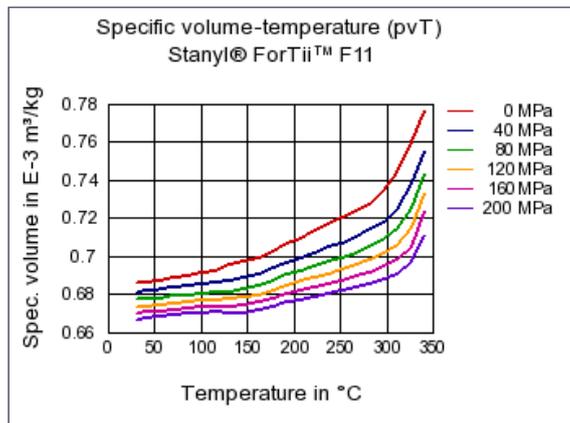
Shearstress-shear rate



Dynamic Shear modulus-temperature



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant

Delivery form

Granules