

Stanyl® 46HF4550

PA46-GF50

50% Glass Reinforced, Heat Stabilized, High Flow, for E&E applications

Print Date: 2019-06-19

Properties	Typical Data	Unit	Test Method
Rheological properties			
	dry / cond		
Molding shrinkage [parallel]	0.4 / *	%	Sim. to ISO 294-4
Molding shrinkage [normal]	0.9 / *	%	Sim. to ISO 294-4
Mechanical properties			
	dry / cond		
Tensile modulus	16000 / 11000	MPa	ISO 527-1/-2
Tensile modulus (120°C)	11000 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	10000	MPa	ISO 527-1/-2
Stress at break	250 / 170	MPa	ISO 527-1/-2
Stress at break (120°C)	150 / -	MPa	ISO 527-1/-2
Stress at break (160°C)	135	MPa	ISO 527-1/-2
Strain at break	2.2 / 3.5	%	ISO 527-1/-2
Strain at break (120°C)	3.5 / -	%	ISO 527-1/-2
Strain at break (160°C)	3.5	%	ISO 527-1/-2
Flexural modulus	15000 / 11000	MPa	ISO 178
Flexural strength	375 / 275	MPa	ISO 178
Charpy impact strength (+23°C)	80 / 100	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	70 / 70	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	15 / 18	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	15 / 15	kJ/m ²	ISO 179/1eA
Thermal properties			
	dry / cond		
Melting temperature (10°C/min)	295 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	290 / *	°C	ISO 75-1/-2

Property Data

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Properties	Typical Data	Unit	Test Method
Temp. of deflection under load (0.45 MPa)	290 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.1 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.1 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (parallel)	0.35	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.4	E-4/°C	ASTM D696
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	Yes / *	-	-
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
UL recognition	Yes / *	-	-
Relative Temperature Index - electrical	65	°C	UL746B
RTI electrical (Thickness (1) tested)	0.75	mm	UL746B

Electrical properties

dry / cond

Volume resistivity	1E13 / 1E9	Ohm*m	IEC 60093
Electric strength	30 / 25	kV/mm	IEC 60243-1
Comparative tracking index	450 / -	V	IEC 60112
Relative permittivity (100Hz)	4.4 / 12	-	IEC 60250
Relative permittivity (1 MHz)	4 / 4.6	-	IEC 60250
Relative permittivity (1GHz)	3.6 / -	-	IEC 60250

Other properties

dry / cond

Humidity absorption	1.85 / *	%	Sim. to ISO 62
Density	1620 / -	kg/m ³	ISO 1183