

Stanyl[®] 46HF4540

PA46–GF40

40% Glass Reinforced, Heat Stabilized, High Flow, for E&E applications

Print Date: 2024–09–17

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage [parallel]	0.5 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	1.1 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	13500 / 9000	MPa	ISO 527–1/–2
Tensile modulus (120°C)	7000 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	6000	MPa	ISO 527–1/–2
Stress at break	210 / 150	MPa	ISO 527–1/–2
Stress at break (120°C)	130 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	115	MPa	ISO 527–1/–2
Strain at break	2.2 / 3.1	%	ISO 527–1/–2
Strain at break (120°C)	4 / –	%	ISO 527–1/–2
Strain at break (160°C)	4	%	ISO 527–1/–2
Flexural modulus	12000 / 7000	MPa	ISO 178
Flexural strength	320 / 220	MPa	ISO 178
Charpy impact strength (+23°C)	70 / 95	kJ/m ²	ISO 179/1eU
Charpy impact strength (–30°C)	60 / 60	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	12 / 15	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (–30°C)	12 / 12	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

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Property Data

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
Temp. of deflection under load (0.45 MPa)	290 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.15 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	1.4 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (parallel)	0.4	E-4/°C	ASTM D696
Coeff. of linear therm. expansion (normal)	0.6	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 3.0 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	3 / *	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 62631-3-1
Electric strength	30 / 25	kV/mm	IEC 60243-1
Comparative tracking index	475 / –	V	IEC 60112
Relative permittivity (1GHz)	3.9 / 4.15	–	IEC 61189-2-721
Relative permittivity (10GHz)	3.87 / 4.03	–	IEC 61189-2-721

OTHER PROPERTIES

DRY / COND

Humidity absorption	2.2 / *	%	Sim. to ISO 62
Density	1510 / –	kg/m³	ISO 1183

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