

# Stanyl<sup>®</sup> 46HF4550

## PA46–GF50

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

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<b><i>RHEOLOGICAL PROPERTIES</i></b>			
	<i>DRY / COND</i>		
Molding shrinkage [parallel]	0.4 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	0.9 / *	%	Sim. to ISO 294–4
<b><i>MECHANICAL PROPERTIES</i></b>			
	<i>DRY / COND</i>		
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 <sup>2</sup>	ISO 179/1eU
Charpy impact strength (–30°C)	70 / 70	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	15 / 18	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (–30°C)	15 / 15	kJ/m <sup>2</sup>	ISO 179/1eA
<b><i>THERMAL PROPERTIES</i></b>			
	<i>DRY / COND</i>		
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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<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)	0.1 / *	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 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	450 / –	V	IEC 60112
Relative permittivity (100Hz)	4.4 / 12	–	IEC 62631-2-1
Relative permittivity (1 MHz)	4 / 4.6	–	IEC 62631-2-1
Relative permittivity (1GHz)	3.6 / –	–	IEC 61189-2-721

### *OTHER PROPERTIES*

#### *DRY / COND*

Humidity absorption	1.85 / *	%	Sim. to ISO 62
Density	1620 / –	kg/m <sup>3</sup>	ISO 1183