

# Stanyl<sup>®</sup> 46HF4530

## PA46–GF30

30% Glass Reinforced, Heat Stabilized, High Flow, for E&E applications

Print Date: 2024–03–27

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES		DRY / COND	
Molding shrinkage [parallel]	0.5 / *	%	Sim. to ISO 294–4
Molding shrinkage [normal]	1.3 / *	%	Sim. to ISO 294–4
MECHANICAL PROPERTIES		DRY / COND	
Tensile modulus	10000 / 6000	MPa	ISO 527–1/–2
Tensile modulus (120°C)	5800 / –	MPa	ISO 527–1/–2
Tensile modulus (160°C)	5300	MPa	ISO 527–1/–2
Tensile modulus (180°C)	5000	MPa	ISO 527–1/–2
Tensile modulus (200°C)	4700	MPa	ISO 527–1/–2
Stress at break	180 / 120	MPa	ISO 527–1/–2
Stress at break (120°C)	115 / –	MPa	ISO 527–1/–2
Stress at break (160°C)	100	MPa	ISO 527–1/–2
Stress at break (180°C)	95	MPa	ISO 527–1/–2
Stress at break (200°C)	90	MPa	ISO 527–1/–2
Strain at break	2.5 / 5	%	ISO 527–1/–2
Strain at break (120°C)	5 / –	%	ISO 527–1/–2
Strain at break (160°C)	5	%	ISO 527–1/–2
Strain at break (180°C)	5	%	ISO 527–1/–2
Strain at break (200°C)	5	%	ISO 527–1/–2
Flexural modulus	9500 / 5500	MPa	ISO 178
Flexural modulus (120°C)	5100	MPa	ISO 178
Flexural modulus (160°C)	4900	MPa	ISO 178
Flexural strength	270 / 160	MPa	ISO 178

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Flexural strength (120°C)	140	MPa	ISO 178
Flexural strength (160°C)	125	MPa	ISO 178
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)	10 / 15	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	10 / 10	kJ/m²	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
Temp. of deflection under load (0.45 MPa)	290 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.25 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.6 / *	E-4/°C	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	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	550 / -	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

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
OTHER PROPERTIES	DRY / COND		
Humidity absorption	2.5 / *	%	Sim. to ISO 62
Density	1410 / –	kg/m³	ISO 1183

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