

Stanyl® HFX82S

PA46-GF45 FR(40)

45% Glass Reinforced, Halogen free and free of red phosphorous

Stanyl® HFX82S is an electro-friendly & halogen-free flame-retarded high heat polyamide that offers an excellent combination of high CTI, flow and weld-line strength. HFX-grades are often used in connectors such as USB type C.

Properties	Typical Data	Unit	Test Method
Rheological properties			
	dry / cond		
Molding shrinkage (parallel)	0.3 / *	%	ISO 294-4
Molding shrinkage (normal)	0.9 / *	%	ISO 294-4
Mechanical properties			
	dry / cond		
Tensile modulus	15200 / 10300	MPa	ISO 527-1/-2
Tensile modulus (120°C)	7700 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	6500	MPa	ISO 527-1/-2
Stress at break	180 / 130	MPa	ISO 527-1/-2
Stress at break (120°C)	100 / -	MPa	ISO 527-1/-2
Stress at break (160°C)	80	MPa	ISO 527-1/-2
Strain at break	2.2 / 2.8	%	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	14000 / 10200	MPa	ISO 178
Flexural modulus (120°C)	8300	MPa	ISO 178
Flexural modulus (160°C)	7300	MPa	ISO 178
Flexural strength	255 / 195	MPa	ISO 178
Flexural strength (120°C)	150	MPa	ISO 178
Flexural strength (160°C)	120	MPa	ISO 178
Charpy impact strength (+23°C)	70 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	13 / -	kJ/m ²	ISO 179/1eA



Property Data

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Thermal properties			
Melting temperature (10°C/min)	286 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	276 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	282 / *	°C	ISO 75-1/-2
Burning Behav. at 3.0 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	3 / *	mm	IEC 60695-11-10
UL recognition	Yes / *	-	-
Electrical properties			
Electric strength	40 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	V	IEC 60112
Relative permittivity (1GHz)	4.2 / 4.4	-	IEC 60250
Other properties			
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1600 / -	kg/m ³	ISO 1183

