

Product Texts

40% Glass Reinforced, Heat Stabilized, Flame Retardant, High Flow

ISO 1043 PA46-GF40 FR(17)

Stanyl® 46HF5040 is an electro-friendly & flame-retarded high heat polyamide with unmatched high flow that offers an excellent combination of flame-retardancy and mechanical properties. 46HF-grades are often used in thin-walled and multi-cavity connectors such as DDR-connectors.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Density of melt	1570	kg/m ³	-
^[C] Thermal conductivity of melt	0.335	W/(m K)	-
^[C] Spec. heat capacity of melt	1550	J/(kg K)	-
^[C] Eff. thermal diffusivity	1.4E-7	m ² /s	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	15000 / 10500	MPa	ISO 527
^[C] Stress at break	190 / 130	MPa	ISO 527
^[C] Strain at break	1.8 / 3	%	ISO 527
^[C] Charpy impact strength, +23°C	50 / 70	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	40 / 40	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	13 / 14	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	14 / 14	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	295 / *	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	75 / *	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	290 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	290 / *	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	290 / *	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	17 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	65 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Oxygen index	37 / *	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.3 / 12	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	4 / 4.5	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	60 / 3300	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	160 / 700	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13 / 1E8	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
^[C] Electric strength	30 / 20	kV/mm	IEC 60243-1
^[C] Comparative tracking index	325 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	5.1 / *	%	Sim. to ISO 62
^[C] Humidity absorption	1.4 / *	%	Sim. to ISO 62
^[C] Density	1770 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	80 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant, Platable, Heat stabilized or stable to heat

Delivery form

Pellets

Regional Availability

North America, Europe, Asia Pacific

Additives

Lubricants, Release agent

Other text information

Injection molding

[Injection Molding Recommendations](#)

[Hot runner recommendations for molding high heat performance Engineering Materials](#)

[Steel recommendations for molds screws and barrels](#)

[Supporting document for Stanyl quality processing](#)

[Trouble shooting guideline for injection molding](#)