

Product Texts

30% Glass Reinforced, Heat Stabilized, Lubricated

ISO 1043 PA46-GF30

Stanyl® TW241F6 is a high heat polyamide that offers excellent creep resistance, strength, stiffness and fatigue resistance especially at high temperatures in combination with cycle-time advantages and excellent flow.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Density of melt	1210	kg/m ³	-
^[C] Thermal conductivity of melt	0.296	W/(m K)	-
^[C] Spec. heat capacity of melt	2200	J/(kg K)	-
^[C] Eff. thermal diffusivity	1.1E-7	m ² /s	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	10000 / 6000	MPa	ISO 527
^[C] Stress at break	210 / 115	MPa	ISO 527
^[C] Strain at break	3.7 / 6	%	ISO 527
^[C] Tensile creep modulus, 1000h	* / 4500	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	80 / 100	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	65 / 75	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	12 / 21	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	11 / 11	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	25 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	60 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	-
Yellow Card available	yes / *	-	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.3 / 16	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	4 / 4.7	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	70 / 6000	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	200 / 1000	E-4	IEC 62631-2-1
^[C] Volume resistivity	1E12 / 1E7	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
^[C] Electric strength	30 / 20	kV/mm	IEC 60243-1
^[C] Comparative tracking index	300 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	9.5 / *	%	Sim. to ISO 62
^[C] Humidity absorption	2.6 / *	%	Sim. to ISO 62
^[C] Density	1410 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	145 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Special Characteristics

Heat stabilized or stable to heat

Additives

Lubricants

Regional Availability

North America, Europe, Asia Pacific

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](#)