

Product Texts

60% Glass Reinforced, Heat Stabilized, Good Flow

ISO 1043 PA46-GF60

Stanyl® TW241F12 is a high heat polyamide with superior flow that offers excellent creep resistance, strength, stiffness and fatigue resistance especially at high temperatures in combination with cycle-time advantages. TW241F12 has an excellent track-record in structural parts and gear applications

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577
^[C] Density of melt	1550	kg/m ³	-
^[C] Thermal conductivity of melt	0.43	W/(m K)	-
^[C] Spec. heat capacity of melt	1450	J/(kg K)	-
^[C] Eff. thermal diffusivity	1.94E-7	m ² /s	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	20000 / 12000	MPa	ISO 527
^[C] Stress at break	255 / 170	MPa	ISO 527
^[C] Strain at break	2 / 3	%	ISO 527
^[C] Tensile creep modulus, 1000h	* / 10500	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	90 / 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	18 / 18	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	18 / 18	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	20 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	35 / *	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	5.4 / *	%	Sim. to ISO 62
^[C] Humidity absorption	1.4 / *	%	Sim. to ISO 62
^[C] Density	1730 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	75 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Regional Availability

North America, Europe, Asia Pacific

Special Characteristics

Platable, Heat stabilized or stable to heat

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](#)