Stanyl® TW271F6

(PA46+PTFE)-GF30 Envalior

Product Texts

30% Glass Reinforced, Heat Stabilized, Wear and Friction Modified

ISO 1043 (PA46+PTFE)-GF30

Stanyl® TW271F6 is a friction-modified 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. TW271F6 has an excellent track-record in gear applications.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Density of melt	**1320**	kg/m³	-
[C] Thermal conductivity of melt	**0.319**	W/(m K)	-
[C] Spec. heat capacity of melt	**1890**	J/(kg K)	-
[C] Eff. thermal diffusivity	**1.26E-7**	m²/s	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**10500 / 6600**	MPa	ISO 527
[C] Stress at break	**200 / 130**	MPa	ISO 527
[C] Strain at break	**3.4 / 6**	%	ISO 527
[C] Charpy impact strength, +23°C	**85 / 90**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**65 / 70**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**13 / 17**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**11 / 11**	kJ/m²	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 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] Volume resistivity	**1E12 / 1E7**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / 1E13**	Ohm	IEC 62631-3-2
[C] Comparative tracking index	**400 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**7.4 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**2.2 / ***	%	Sim. to ISO 62
[C] Density	**1530 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Viscosity number	**145 / ***	cm³/g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing
Injection Molding

Features
Tribologic Grade

Delivery form
Pellets

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