

Product Texts

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

ISO 1043 (PA46+PTFE)-CF30

Stanyl® TW271B6 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. TW271B6 has an excellent track-record in gear applications.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.7 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	24000 / 14500	MPa	ISO 527
^[C] Stress at break	260 / 170	MPa	ISO 527
^[C] Strain at break	1.6 / 3.5	%	ISO 527
^[C] Charpy impact strength, +23°C	50 / 80	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	50 / 55	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	8 / 17	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	7 / 7	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] Coeff. of linear therm. expansion, parallel	25 / *	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	8.7 / *	%	Sim. to ISO 62
^[C] Humidity absorption	2.3 / *	%	Sim. to ISO 62
^[C] Density	1320 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	150 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Features

Tribologic Grade

Special Characteristics

Heat stabilized or stable to heat

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](#)