

Product Texts

50% Glass Reinforced, Heat Stabilized, Wear and Friction Modified

ISO 1043 (PA46+PTFE)-GF50

Stanyl® TW278F10 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. TW278F10 has an excellent track-record in gear applications.

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	16000 / 10700	MPa	ISO 527
^[C] Stress at break	235 / 170	MPa	ISO 527
^[C] Strain at break	2.2 / 3.3	%	ISO 527
^[C] Charpy impact strength, +23°C	55 / 85	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	35 / 65	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	18 / 13	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	11 / 8.5	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	290 / *	°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	285 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	288 / *	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	285 / *	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	30 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	30 / *	E-6/K	ISO 11359-1/-2

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Humidity absorption	1.6 / *	%	Sim. to ISO 62
^[C] Density	1690 / -	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

Delivery form

Pellets

Additives

Lubricants

Special Characteristics

Platable, Heat stabilized or stable to heat

Features

Tribologic Grade

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](#)