

DSM Stanyl® TW250F6 Nylon 46-30% Glass Reinforced (European Grade) (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 46 , Nylon 46, Glass Fiber Reinforced

Material Notes:

Stanyl is a high performance polyamide providing good performance and value across a broad range of automotive and electronic applications. Stanyl offers: Highest mechanical properties at high temperatures Excellent resistance to wear and low friction Outstanding flow for easy processing and exceptional design freedom Stanyl High Flow grades that match the best flowing LCPs while maintaining a high level of mechanical properties Key Applications: Automotive: Powertrain components, Charge-air coolers, EPS and ETC gears, Motor Sensors, Auto connectors, Chain tensioners E&E: Connectors, Microswitches, Bobbins, Memory modules, Motor components, Industrial, Specialty films and fibers, Consumer appliances Information provided by DSM.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Stanyl-TW250F6-Nylon-46-30-Glass-Reinforced-European-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.68 g/cc	0.0607 lb/in ³	ISO 1183
Water Absorption	5.9 %	5.9 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	1.6 %	1.6 %	Humidity Absorption; Sim. to ISO 62
Viscosity Test	145 cm ³ /g	145 cm ³ /g	Viscosity Number
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	180 MPa	26100 psi	ISO 527-1/-2
Elongation at Break	2.5 %	2.5 %	ISO 527-1/-2
Tensile Modulus	12.0 GPa	1740 ksi	ISO 527-1/-2
Charpy Impact Unnotched	5.00 J/cm ² @Temperature -30.0 °C	23.8 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	5.00 J/cm ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	1.00 J/cm ² @Temperature 23.0 °C	4.76 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	11.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
Melting Point	295 $^\circ\text{C}$	563 $^\circ\text{F}$	10 $^\circ\text{C}/\text{min}$; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	290 $^\circ\text{C}$	554 $^\circ\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	290 $^\circ\text{C}$	554 $^\circ\text{F}$	ISO 75-1/-2
Vicat Softening Point	290 $^\circ\text{C}$	554 $^\circ\text{F}$	50 $^\circ\text{C}/\text{h}$ 50N; ISO 306
Glass Transition Temp, Tg	75.0 $^\circ\text{C}$	167 $^\circ\text{F}$	Glass Transition Temperature (10 $^\circ\text{C}/\text{min}$); ISO 11357-1/-2
Flammability, UL94	V-0	V-0	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	V-0	V-0	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	37 %	37 %	ISO 4589-1/-2
Glow Wire Test	800 $^\circ\text{C}$	1470 $^\circ\text{F}$	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	925 $^\circ\text{C}$	1700 $^\circ\text{F}$	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 $^\circ\text{C}$	1760 $^\circ\text{F}$	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	960 $^\circ\text{C}$	1760 $^\circ\text{F}$	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Dielectric Constant	4.0	4.0	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	4.2	4.2	IEC 60250

Electrical Properties	@Frequency 100 Hz Metric	@Frequency 100 Hz English	Comments
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.00060	0.00060	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0018	0.0018	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	175 V	175 V	IEC 60112

Descriptive Properties	Value	Comments
Flame Retardant	Yes	
Flame Retarding Agent	Yes	
Heat stabilized or stable to heat	Yes	
Injection molding	Yes	
Lubricants	Yes	
Platable	Yes	
Release Agent	Yes	
With Fillers	Yes	

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