

DSM Stanyl® TW200F8 Nylon 46-40% 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-TW200F8-Nylon-46-40-Glass-Reinforced-European-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.51 g/cc	0.0546 lb/in ³	ISO 1183
Water Absorption	8.0 %	8.0 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	2.2 %	2.2 %	Humidity Absorption; Sim. to ISO 62
Viscosity Test	145 cm ³ /g	145 cm ³ /g	Viscosity Number
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 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	230 MPa	33400 psi	ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	13.0 GPa	1890 ksi	ISO 527-1/-2
Charpy Impact Unnotched	7.50 J/cm ²	35.7 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	8.50 J/cm ²	40.5 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

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	HB	HB	IEC 60695-11-10
	@Thickness 0.900 mm	@Thickness 0.0354 in	
	HB	HB	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	22 %	22 %	ISO 4589-1/-2

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	
	4.3	4.3	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.00070	0.00070	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0020	0.0020	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	300 V	300 V	IEC 60112

Descriptive Properties	Value	Comments
Heat stabilized or stable to heat	Yes	
Injection molding	Yes	
Platable	Yes	
With Fillers	Yes	

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