DSM Stanyl® TW241F10 Nylon 46-50% 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 freedomStanyl High Flowgrades that match the best flowing LCPs while maintaining a high level of mechanical propertiesKey Applications: Automotive: Powertrain components, Charge-air coolers, EPS and ETC gears, Motor Sensors, Auto connectors, Chain tensionersE&E: Connectors, Microswitches, Bobbins, Memory modules, Motor components, Industrial, Specialty films and fibers, Consumer appliancesInformation provided by DSM.

Order this product through the following link:
http://www.lookpolymers.com/polymer_DSM-Stanyl-TW241F10-Nylon-46-50-Glass-Reinforced-European-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.62 g/cc	0.0585 lb/in³	ISO 1183
Water Absorption	7.0 %	7.0 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	1.8 %	1.8 %	Humidity Absorption; Sim. to ISO 62
Viscosity Test	140 cm³/g	140 cm³/g	Viscosity Number
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	250 MPa	36300 psi	ISO 527-1/-2
Elongation at Break	2.7 %	2.7 %	ISO 527-1/-2
Tensile Modulus	16.0 GPa	2320 ksi	ISO 527-1/-2
Charpy Impact Unnotched	8.00 J/cm² @Temperature -30.0 °C	38.1 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
	9.00 J/cm² @Temperature 23.0 °C	42.8 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.40 J/cm² @Temperature -30.0 °C	6.66 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA
	1.60 J/cm² @Temperature 23.0 °C	7.61 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

~~Mechanical Properties~~ Thermal Properties	~~Metric~~ Metric	~~English~~ English	~~Comments~~ Comments
CTE, linear, Parallel to Flow	20.0 µm/m-°C @Temperature 20.0 °C	11.1 µin/in-°F @Temperature 68.0 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature 20.0 °C	44.4 µin/in-°F @Temperature 68.0 °F	ISO 11359-1/-2
Melting Point	295 °C	563 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	290 °C	554 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	290 °C	554 °F	ISO 75-1/-2
Vicat Softening Point	290 °C	554 °F	50°C/h 50N; ISO 306
Glass Transition Temp, Tg	75.0 °C	167 °F	Glass Transition Temperature (10°C/min); ISO 11357-1/-2
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	IEC 60695-11-10
	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	IEC 60695-11-10
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 @Frequency 1e+6 Hz	4.0 @Frequency 1e+6 Hz	IEC 60250
	4.3 @Frequency 100 Hz	4.3 @Frequency 100 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.00070 @Frequency 100 Hz	0.00070 @Frequency 100 Hz	IEC 60250
	0.0020 @Frequency 1e+6 Hz	0.0020 @Frequency 1e+6 Hz	IEC 60250
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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