

DSM Stanyl® 46HF5041LW Nylon 46-40% Glass Reinforced (European and Asian 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-46HF5041LW-Nylon-46-40-Glass-Reinforced-European-and-Asian-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.87 g/cc	0.0676 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	1.1 %	1.1 %	Humidity Absorption; Sim. to ISO 62
Viscosity Test	70 cm ³ /g	70 cm ³ /g	Viscosity Number
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	150 MPa	21800 psi	ISO 527-1/-2
Elongation at Break	1.3 %	1.3 %	ISO 527-1/-2
Tensile Modulus	16.0 GPa	2320 ksi	ISO 527-1/-2
Charpy Impact Unnotched	2.50 J/cm ² @Temperature 23.0 °C	11.9 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm ² @Temperature 23.0 °C	3.81 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	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	44.4 μin/in-°F	ISO 11359-1/-2

Thermal Properties	@Temperature 20.0 °C Metric	@Temperature 68.0 °F English	Comments
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)	270 °C	518 °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
UL RTI, Electrical	140 °C	284 °F	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	140 °C	284 °F	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
UL RTI, Mechanical with Impact	110 °C	230 °F	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	125 °C	257 °F	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	120 °C	248 °F	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	125 °C	257 °F	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	V-0	V-0	IEC 60695-11-10
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	V-0	V-0	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Glow Wire Test	825 °C	1520 °F	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	925 °C	1700 °F	Glow Wire Ignition Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12

Thermal Properties	@Thickness 3.00mm Metric	@Thickness 0.118in English	Comments
Electrical Properties	Metric	English	Comments
Comparative Tracking Index	250 - 399 V	250 - 399 V	PLC 2; UL 746A

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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