

DSM Stanyl® 46HF5040 Nylon 46-40% Glass Reinforced (European and Asian Grade) (Cond)

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

Material Notes:

Stanlyl is a high performance polyamide providing good performance and value across a broad range of automotive and electronic applications. Stanlyl offers: Highest mechanical properties at high temperatures Excellent resistance to wear and low friction Outstanding flow for easy processing and exceptional design freedom Stanlyl 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-46HF5040-Nylon-46-40-Glass-Reinforced-European-and-Asian-Grade-Cond.php

Physical Properties	Metric	English	Comments
Density	1.77 g/cc	0.0639 lb/in ³	(DAM); ISO 1183
Water Absorption	4.5 %	4.5 %	DAM; Sim. to ISO 62
Moisture Absorption at Equilibrium	1.3 %	1.3 %	Humidity Absorption (DAM); Sim. to ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	DAM; ISO 294-4
	0.0090 cm/cm	0.0090 in/in	DAM; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	130 MPa	18900 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	7.00 J/cm ² @Temperature 23.0 °C	33.3 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.20 J/cm ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	1.40 J/cm ² @Temperature 23.0 °C	6.66 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA
Tensile Creep Modulus, 1000 hours	9500 MPa	1.38e+6 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
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	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+10 ohm-cm	1.00e+10 ohm-cm	IEC 60093
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	IEC 60093
Dielectric Strength	20.0 kV/mm	508 kV/in	IEC 60243-1
Comparative Tracking Index	250 - 399 V	250 - 399 V	PLC 2; UL 746A
	350 V	350 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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