Ascend Performance Materials Vydyne® R530H BK02 Nylon 66, 30% Glass Reinforced, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Glass Fiber Filled

Material Notes:

Vydyne® R530H BK02 is high-flow, 30% glass-fiber reinforced, heat-stabilized PA66 resin. Available in black, it is specifically designed to maximize the retention of physical properties when exposed to anti-freeze solutions at elevated temperatures. This product is lubricated for improved machine feed and flow. Glass-reinforced Vydyne resins provide higher heat distortion temperature, resistance to creep and better dimensional stability when compared with unreinforced PA66. These products have good chemical resistance to a broad range of chemicals including gasoline, hydraulic fluids and most solvents. Vydyne R530H BK02 is heat-stabilized to minimize oxidative degradation of the polymer when exposed to elevated temperatures in service. This product provides improved retention of physical properties under exposure to long-term heat. Also, Vydyne R530H BK02 has excellent knit-line strength and fatigue resistance, which is essential for cycle testing with anti-freeze solutions. Availability:Asia PacificEuropeNorth AmericaFiller/Reinforcement:Glass Fiber, 30% Filler by WeightAdditive:Heat StabilizerLubricant Features: Antifreeze ResistantFatigue ResistantGasoline ResistanceGood Chemical ResistanceHeat StabilizedHigh Flow Lubricated Solvent ResistantUses: Automotive Under the Hood Appearance: BlackForms: PelletsProcessing Method: Injection MoldingInformation provided by Ascend Performance Materials.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-R530H-BK02-Nylon-66-30-Glass-Reinforced-DAM.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in³	ISO 1183
Water Absorption	0.90 % @Time 86400 sec	0.90 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.9 %	1.9 %	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0040 cm/cm @Diameter 2.00 mm	0.0040 in/in @Diameter 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm @Diameter 2.00 mm	0.0090 in/in @Diameter 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	195 MPa	28300 psi	ISO 527-2
Elongation at Break	3.0 %	3.0 %	ISO 527-2
Tensile Modulus	10.0 GPa	1450 ksi	ISO 527-2
Flexural Strength	270 MPa	39200 psi	ISO 178
Flexural Modulus	9.60 GPa	1390 ksi	ISO 178

Mechanical Properties	Metric	English	Comments
Poissons Ratio	0.40	0.40	ISO 527
Izod Impact, Notched (ISO)	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	ISO 180
	12.0 kJ/m² @Temperature 23.0 °C	5.71 ft-lb/in² @Temperature 73.4 °F	ISO 180
Charpy Impact Unnotched	6.50 J/cm² @Temperature -30.0 °C	30.9 ft-lb/in² @Temperature -22.0 °F	ISO 179
	7.50 J/cm² @Temperature 23.0 °C	35.7 ft-lb/in² @Temperature 73.4 °F	ISO 179
Charpy Impact, Notched	1.00 J/cm² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	ISO 179
	1.10 J/cm² @Temperature 23.0 °C	5.23 ft-lb/in² @Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	2.20 µm/m-°C @Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	1.22 µin/in-°F @Thickness 0.0787 in, Temperature 73.4 - 131 °F	ISO 11359-2
CTE, linear, Transverse to Flow	11.0 µm/m-°C @Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	6.11 µin/in-°F @Thickness 0.0787 in, Temperature 73.4 - 131 °F	ISO 11359-2
Melting Point	260 °C	500 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	260 °C	500 °F	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	250 °C	482 °F	Unannealed; ISO 75-2/A
UL RTI, Electrical	140 °C @Thickness 0.750 mm	284 °F @Thickness 0.0295 in	UL 746
	140 °C @Thickness 1.50 mm	284 °F @Thickness 0.0591 in	UL 746
	140 °C @Thickness 3.00 mm	284 °F @Thickness 0.118 in	UL 746
	120 °C	248 °F	

Thermal Properties	Metric	English	Comments
UL RTI, Mechanical with Impact	@Thickness 0.750 mm	@Thickness 0.0295 in	UL 746
	120 °C @Thickness 1.50 mm	248 °F @Thickness 0.0591 in	UL 746
	120 °C @Thickness 3.00 mm	248 °F @Thickness 0.118 in	UL 746
UL RTI, Mechanical without Impact	125 °C @Thickness 0.750 mm	257 °F @Thickness 0.0295 in	UL 746
	140 °C @Thickness 1.50 mm	284 °F @Thickness 0.0591 in	UL 746
	140 °C @Thickness 3.00 mm	284 °F @Thickness 0.118 in	UL 746
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	
Glow Wire Test	675 °C @Thickness 0.750 mm	1250 °F @Thickness 0.0295 in	Flammability Index; IEC 60695-2-12
	675 °C @Thickness 1.50 mm	1250 °F @Thickness 0.0591 in	Flammability Index; IEC 60695-2-12
	675 °C @Thickness 3.00 mm	1250 °F @Thickness 0.118 in	Flammability Index; IEC 60695-2-12
	700 °C @Thickness 0.750 mm	1290 °F @Thickness 0.0295 in	Ignition Temperature; IEC 60695-2-13
	700 °C @Thickness 1.50 mm	1290 °F @Thickness 0.0591 in	Ignition Temperature; IEC 60695-2-13
	700 °C @Thickness 3.00 mm	1290 °F @Thickness 0.118 in	Ignition Temperature; IEC 60695-2-13

Electrical Properties	Metric	English	Comments

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm @Thickness 3.00 mm	1.00e+13 ohm-cm @Thickness 0.118 in	IEC 60093
Dielectric Strength	20.0 kV/mm @Thickness 1.00 mm	508 kV/in @Thickness 0.0394 in	IEC 60243
Arc Resistance	60 - 119 sec @Thickness 3.00 mm	60 - 119 sec @Thickness 0.118 in	ASTM D495
Comparative Tracking Index	250 - 399 V @Thickness 3.00 mm	250 - 399 V @Thickness 0.118 in	IEC 60112
Hot Wire Ignition, HWI	7.0 - 14 sec @Thickness 0.750 mm	7.0 - 14 sec @Thickness 0.0295 in	UL 746
	7.0 - 14 sec @Thickness 3.00 mm	7.0 - 14 sec @Thickness 0.118 in	UL 746
	15 - 29 sec @Thickness 1.50 mm	15 - 29 sec @Thickness 0.0591 in	UL 746
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 0.750 mm	>= 120 arcs @Thickness 0.0295 in	UL 746
	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	UL 746
	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	UL 746
High Voltage Arc-Tracking Rate, HVTR	10.1 - 25.4 mm/min	0.398 - 1.00 in/min	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	280 - 310 °C	536 - 590 °F	
Middle Barrel Temperature	280 - 310 °C	536 - 590 °F	
Front Barrel Temperature	280 - 310 °C	536 - 590 °F	
Nozzle Temperature	280 - 310 °C	536 - 590 °F	
Melt Temperature	285 - 305 °C	545 - 581 °F	
Mold Temperature	65.0 - 95.0 °C	149 - 203 °F	
Drying Temperature	80.0 °C	176 °F	

Processing Properties	Metric	English	Comments
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Suggested Max Regrind	25 %	

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