

Ascend Performance Materials Vydne® R530H Nylon 66, 30% Glass Filled, Dry as Molded

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

Material Notes:

Vydne® R530H is a general-purpose, heat-stabilized, hydrolysis-resistant, 30% glass-fiber reinforced PA66 resin. Available in natural, 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 Vydne 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. Vydne R530H resin is heat-stabilized to minimize oxidative degradation of the polymer when exposed elevated temperatures in service. This product provides improved retention of physical properties under exposure to long-term heat. Also, Vydne R530H has excellent knit-line strength and fatigue resistance, which is essential for cycle testing with anti-freeze solutions. Typical Applications/End Uses: Vydne R525H resin is used for several under-the-hood automotive applications. The hydrolysis-resistant properties makes it an excellent candidate for radiator end tank and heater core applications. Availability: Asia Pacific Europe North America Additive: Heat Stabilizer Lubricant Features: Antifreeze Resistant Fatigue Resistant Gasoline Resistance Good Chemical Resistance Good Flow Heat Stabilized Lubricated Solvent Resistant Uses: Automotive Under the Hood Appearance: Natural Color Forms: Pellets Processing Method: Injection Molding

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydne-R530H-Nylon-66-30-Glass-Filled-Dry-as-Molded.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.37 g/cc	1.37 g/cc	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	0.0040 cm/cm @Thickness 2.00 mm	0.0040 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm @Thickness 2.00 mm	0.0090 in/in @Thickness 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	3.3 %	3.3 %	ISO 527-2
Tensile Modulus	10.0 GPa	1450 ksi	ISO 527-2
Flexural Strength	270 MPa	39200 psi	ISO 178

Flexural Modulus Mechanical Properties	9.60 GPa Metric	1390 ksi English	ISO 178 Comments
Poissons Ratio	0.40	0.40	ISO 527
Izod Impact, Notched (ISO)	10.0 kJ/m ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	ISO 180
	12.0 kJ/m ² @Temperature 23.0 °C	5.71 ft-lb/in ² @Temperature 73.4 °F	ISO 180
Charpy Impact Unnotched	6.50 J/cm ² @Temperature -30.0 °C	30.9 ft-lb/in ² @Temperature -22.0 °F	ISO 179
	7.50 J/cm ² @Temperature 23.0 °C	35.7 ft-lb/in ² @Temperature 73.4 °F	ISO 179
Charpy Impact, Notched	1.00 J/cm ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	ISO 179
	1.20 J/cm ² @Temperature 23.0 °C	5.71 ft-lb/in ² @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	ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	250 °C	482 °F	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	284 °F	UL 746

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

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 119 sec	60 - 119 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Comparative Tracking Index	250 - 399 V	250 - 399 V	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
	7.0 - 15 sec	7.0 - 15 sec	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	15 - 30 sec	15 - 30 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
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
Processing Temperature	285 - 305 °C	545 - 581 °F	Melt
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	
Mold Temperature	65.0 - 95.0 °C	149 - 203 °F	

Descriptive Properties	Value	Comments
Suggested Max Regrind	25%	

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