

Ascend Performance Materials Vydyn® R525H Nylon 66, 25% Glass Filled, Dry as Molded

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

Material Notes:

Vydyn® R525H is hydrolysis-resistant, 25% glass-fiber reinforced, heat-stabilized 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. Vydyn R525H 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, Vydyn R525H has excellent knit-line strength and fatigue resistance, which is essential for cycle testing with anti-freeze solutions. Typical Applications/End Uses: Vydyn R525H resin is used for under-the-hood automotive applications. Its hydrolysis-resistant properties make R525 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-Vydyn-R525H-Nylon-66-25-Glass-Filled-Dry-as-Molded.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.32 g/cc	1.32 g/cc	ISO 1183
Water Absorption	0.90 % @Time 86400 sec	0.90 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	2.0 %	2.0 %	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	174 MPa	25200 psi	ISO 527-2
Elongation at Break	3.0 %	3.0 %	ISO 527-2
Tensile Modulus	8.60 GPa	1250 ksi	ISO 527-2
Flexural Strength	250 MPa	36300 psi	ISO 178

Flexural Modulus Mechanical Properties	7.70 GPa Metric	1120 ksi English	ISO 178 Comments
Poissons Ratio	0.40	0.40	ISO 527-2
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	ISO 180
	9.00 kJ/m ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	ISO 180
Charpy Impact Unnotched	5.50 J/cm ² @Temperature -30.0 °C	26.2 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	6.50 J/cm ² @Temperature 23.0 °C	30.9 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.00 J/cm ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	1.10 J/cm ² @Temperature 23.0 °C	5.24 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear	3.50 µm/m-°C @Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	1.94 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)	258 °C	496 °F	ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	250 °C	482 °F	ISO 75-2/A
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	

Thermal Properties	675 °C Metric	1250 °F English	Comments
	@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
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Dielectric Strength	20.0 kV/mm	508 kV/in	IEC 60243
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Arc Resistance	60 - 119 sec	60 - 119 sec	ASTM D495
	@Thickness 3.00 mm	@Thickness 0.118 in	
Comparative Tracking Index	250 - 399 V	250 - 399 V	IEC 60112
	@Thickness 3.00 mm	@Thickness 0.118 in	
Hot Wire Ignition, HWI	7.0 - 14 sec	7.0 - 14 sec	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	7.0 - 14 sec	7.0 - 14 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
	15 - 29 sec	15 - 29 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

Electrical Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
	>= 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	
Drying Temperature	80.0 °C	176 °F	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Suggested Max Regrind	25%	

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