

Ascend Performance Materials Vydyne® R540 Nylon 66, 40% Glass Reinforced, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 40% Glass Fiber Filled

Material Notes:

Vydyne® R540 is general-purpose, hydrolysis-resistant, 40% glass-fiber reinforced PA66 resin. Available in natural, it is specifically designed to maximize the retention of physical properties when exposed to anti-freeze solution at elevated temperatures. This product is also lubricated for improved flow and offers superior surface appearance. 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..Availability:Asia PacificEuropeNorth AmericaFiller/Reinforcement:Glass Fiber, 40% Filler by WeightAdditive:Lubricant Features: Antifreeze ResistantFatigue ResistantGasoline ResistanceGood Chemical ResistanceGood FlowHydrolysis ResistantLubricatedSolvent Resistant Appearance: Natural ColorForms: 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-R540-Nylon-66-40-Glass-Reinforced-DAM.php

Physical Properties	Metric	English	Comments
Density	1.46 g/cc	0.0527 lb/in ³	ISO 1183
Water Absorption	0.60 % @Time 86400 sec	0.60 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.5 %	1.5 %	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, Yield	220 MPa	31900 psi	ISO 527-2
Elongation at Break	3.0 %	3.0 %	ISO 527-2
Tensile Modulus	14.1 GPa	2050 ksi	ISO 527-2
Flexural Strength	335 MPa	48600 psi	ISO 178
Flexural Modulus	12.3 GPa	1780 ksi	ISO 178
Poissons Ratio	0.40	0.40	ISO 527-2
Izod Impact, Notched (ISO)	13.0 kJ/m ²	6.19 ft-lb/in ²	ISO 180

Mechanical Properties	@Temperature -30.0 °C Metric	@Temperature -22.0 °F English	Comments
	14.0 kJ/m ²	6.66 ft-lb/in ²	ISO 180
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	8.00 J/cm ²	38.1 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.00 J/cm ²	42.8 ft-lb/in ²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	1.70 µm/m-°C	0.944 µin/in-°F	ISO 11359-2
	@Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	@Thickness 0.0787 in, Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	10.0 µm/m-°C	5.56 µin/in-°F	ISO 11359-2
	@Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	@Thickness 0.0787 in, Temperature 73.4 - 131 °F	
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)	252 °C	486 °F	Unannealed; ISO 75-2/A
UL RTI, Electrical	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 with Impact	85.0 °C	185 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	85.0 °C	185 °F	

Thermal Properties	Metric	English	UL 746 Comments
	105 °C @Thickness 1.50 mm	221 °F @Thickness 0.0591 in	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	115 °C @Thickness 0.750 mm	239 °F @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
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	

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	24.0 kV/mm @Thickness 1.00 mm	610 kV/in @Thickness 0.0394 in	IEC 60243
Arc Resistance	120 - 179 sec @Thickness 3.00 mm	120 - 179 sec @Thickness 0.118 in	ASTM D495
Comparative Tracking Index	600 V @Thickness 3.00 mm	600 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 1.50 mm	7.0 - 14 sec @Thickness 0.0591 in	UL 746
	7.0 - 14 sec @Thickness 3.00 mm	7.0 - 14 sec @Thickness 0.118 in	UL 746

Electrical Properties High Amp Arc Ignition, HAI	≥ 120 arcs Metric	≥ 120 arcs English	Comments 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
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	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Suggested Max Regrind	25 %	

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