

Ascend Performance Materials Vydyne® R533 Nylon 66, 33% Glass Filled, Dry as Molded

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

Material Notes:

Vydyne® R533 is general-purpose, 33% glass-reinforced PA66 resin. Available in natural, it is an injection-molding grade resin that is lubricated for good machine feed, flow, and mold release. Glass-reinforced Vydyne resins provide a 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 R533 has tensile strength and modulus properties just below aluminum and zinc and can replace these metals in numerous applications due to an excellent balance of properties. Reduction in production costs, energy consumption and part weight are key advantages of Vydyne glass-reinforced PA66 resins over aluminum and/or zinc die-cast parts. Typical Applications/End Uses: Vydyne R533 resin has been used for many under-the-hood automotive applications, motor housings for power tools and garden appliances. The resin has also been used in miscellaneous brackets, gears and clips, which require high rigidity and strength. Availability: Asia Pacific Europe North America Filler/Reinforcement: Glass Fiber, 33% Filler by Weight Additive: Lubricant Features: Good Flow Good Mold Release High Rigidity High Strength Lubricated Uses: Automotive Under the Hood Gears Housings Power/Other Tools Appearance: Natural Color Forms: Pellets Processing Method: Injection Molding

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-R533-Nylon-66-33-Glass-Filled-Dry-as-Molded.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	ISO 1183
Water Absorption	0.80 % @Time 86400 sec	0.80 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.7 %	1.7 %	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	205 MPa	29700 psi	ISO 527-2
Elongation at Break	3.0 %	3.0 %	ISO 527-2
Tensile Modulus	10.6 GPa	1540 ksi	ISO 527-2
Flexural Strength	290 MPa	42100 psi	ISO 178
Flexural Modulus	9.70 GPa	1410 ksi	ISO 178

Poissons Ratio Mechanical Properties	0.40 Metric	0.40 English	ISO 527-2 Comments
Izod Impact, Notched (ISO)	12.0 kJ/m ²	5.71 ft-lb/in ²	ISO 180
Charpy Impact Unnotched	7.00 J/cm ²	33.3 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	8.00 J/cm ²	38.1 ft-lb/in ²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	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	2.10 µm/m-°C	1.17 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	11.0 µm/m-°C	6.11 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	ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	250 °C	482 °F	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 RTI, Mechanical with Impact	120 °C	248 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	
UL RTI, Mechanical with Impact	100 °C	212 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	100 °C	212 °F	
			UL 746

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
	105 °C	221 °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	
	125 °C	257 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	125 °C	257 °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	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
	@Thickness 3.00 mm	@Thickness 0.118 in	
Dielectric Strength	20.0 kV/mm	508 kV/in	IEC 60243
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Arc Resistance	120 - 179 sec	120 - 179 sec	ASTM D495
	@Thickness 3.00 mm	@Thickness 0.118 in	
Comparative Tracking Index	600 V	600 V	IEC 60112
	@Thickness 3.00 mm	@Thickness 0.118 in	
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	7.0 - 15 sec	7.0 - 15 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	7.0 - 15 sec	7.0 - 15 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties n, HAI	≥ 120 arcs Metric	≥ 120 arcs English	Comments
	@Thickness 0.710 mm	@Thickness 0.0280 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	

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	50%	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China