

## Ascend Performance Materials Vydyne® R533 Nylon 66, 33% Glass Filled, Conditioned (2.5% Moisture)

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 Vydyen 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 EuropeNorth America Filler/Reinforcement: Glass Fiber, 33% Filler by Weight Additive: Lubricant Features: Good FlowGood 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-Conditioned-25-Moisture.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	ISO 1183
Water Absorption	0.80 %	0.80 %	ISO 62
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	1.7 %	1.7 %	50% RH; ISO 62
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	145 MPa	21000 psi	ISO 527-2
Elongation at Break	5.0 %	5.0 %	ISO 527-2
Tensile Modulus	7.90 GPa	1150 ksi	ISO 527-2
Flexural Strength	200 MPa	29000 psi	ISO 178
Flexural Modulus	6.50 GPa	943 ksi	ISO 178



Mechanical Properties	Metric <sub>J/m²</sub>	English b/in²	Comments
Izod Impact, Notched (ISO)	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 180
	14.0 kJ/m²	6.66 ft-lb/in <sup>2</sup>	ISO 180
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	8.50 J/cm <sup>2</sup>	40.5 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.00 J/cm <sup>2</sup>	42.8 ft-lb/in²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.20 J/cm <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.40 J/cm <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	

## **Contact Songhan Plastic Technology Co.,Ltd.**

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