

Ascend Performance Materials Vydyne® R633H Nylon 66/6, 33% Glass Reinforced, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 6/66 , Nylon 66/6 , 30% Glass Fiber Reinforced

Material Notes:

Vydyne® R633H is 33% glass-fiber reinforced PA66/6 copolymer resin for superior surface appearance. Available in natural, this injection-molding grade resin is lubricated for machine feed and mold release. Vydyne R633H 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 PA66/6 resins over aluminum and/or zinc die cast parts. Vydyne R633H is specially formulated to minimize the oxidative and thermal degradation of the PA66/6 copolymer when exposed to elevated temperatures for extended periods of time. Product provides improved retention of physical properties under exposure to long term heat. Vydyne R633H provides a higher heat distortion temperature, better resistance to creep, higher impact and better dimensional stability compared with unreinforced PA66/6. This product also provides a combination of excellent surface appearance with high tensile and modulus properties. This property balance enables usage of Vydyne R633H in applications where aesthetics and performance are important. Typical Applications/End Uses: Vydyne R633H resin has been used for many under-the-hood automotive applications, motor housings for power tools, and garden appliances. These resins have also been used in miscellaneous brackets, gears and clips that require high rigidity and strength. Availability:Asia PacificEuropeNorth AmericaFiller/Reinforcement:Glass Fiber, 33% Filler by WeightAdditive:LubricantHeat Stabilizer Features:CopolymerGood Mold ReleaseGood Surface FinishHeat Stabilized High Tensile Strength Lubricated Uses:Automotive Under the HoodGearsHousingsLawn and Garden EquipmentMetal ReplacementPower/Other ToolsAppearance: 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-R633H-Nylon-666-33-Glass-Reinforced-DAM.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 lb/in ³	ISO 1183
Water Absorption	1.3 % @Time 86400 sec	1.3 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	2.3 %	2.3 %	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	184 MPa	26700 psi	ISO 527-2
Elongation at Break	4.0 %	4.0 %	ISO 527-2

Mechanical Properties	Metric	English	Comments
Tensile Modulus	10.8 GPa	1550 ksi	ISO 527-2
Flexural Strength	255 MPa	37000 psi	ISO 178
Flexural Modulus	8.80 GPa	1280 ksi	ISO 178
Poissons Ratio	0.40	0.40	ISO 527-2
Izod Impact, Notched (ISO)	12.0 kJ/m ²	5.71 ft-lb/in ²	ISO 180
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	13.0 kJ/m ²	6.19 ft-lb/in ²	ISO 180
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	4.40 J/cm ²	20.9 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.10 J/cm ²	24.3 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.10 J/cm ²	5.23 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.20 J/cm ²	5.71 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	1.50 µm/m-°C	0.833 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)	230 °C	446 °F	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	220 °C	428 °F	Unannealed; ISO 75-2/A

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	280 - 310 °C	536 - 590 °F	

Middle Barrel Temperature Processing Properties	280 - 310 °C Metric	536 - 590 °F English	Comments
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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