

## Ascend Performance Materials Vydyne® R543H Nylon 66, 43% Glass Filled, Conditioned (2.5% Moisture)

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

### Material Notes:

Vydyne® R543H is general-purpose, 43% glass-reinforced PA66 resin. Available in natural, it is an injection-molding grade resin that is lubricated for improved machine feed, flow and mold release. Glass-reinforced Vydyne resins provide a higher heat distortion temperature, better resistance to creep, higher impact and better dimensional stability when compared with unreinforced PA66. These products have good chemical resistance to a broad range of chemicals, including many aliphatic and aromatic hydrocarbons found in most solvent, gasoline, hydraulic fluids, greases and machine oils. Vydyne R543H resin 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. Vydyne R543H is formulated to minimize the oxidative and thermal degradation of the PA66 polymer when exposed to elevated temperatures for extended periods of time. Vydyne R543H provides improved retention of physical properties under exposure to long-term heat. The continuous operating use temperature is 275°F, with short-term peak temperature as high as 475°F. Availability: Asia Pacific Europe North America Filler/Reinforcement: Glass Fiber, 43% Filler by Weight Additive: Heat Stabilizer Lubricant Features: Gasoline Resistance Good Chemical Resistance Good Creep Resistance Good Dimensional Stability Good Flow Good Impact Resistance Good Mold Release Grease Resistant Heat Stabilized High Rigidity High Strength High Tensile Strength Lubricated Oil Resistant Solvent Resistant Uses: Automotive Under the Hood Gears Housings Lawn and Garden Equipment 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-R543H-Nylon-66-43-Glass-Filled-Conditioned-25-Moisture.php](http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-R543H-Nylon-66-43-Glass-Filled-Conditioned-25-Moisture.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.50 g/cc	1.50 g/cc	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	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	170 MPa	24700 psi	ISO 527-2
Elongation at Break	4.0 %	4.0 %	ISO 527-2

Mechanical Properties	Metric <sup>1</sup>	English <sup>1</sup>	Comments
Flexural Strength	250 MPa	36300 psi	ISO 178
Flexural Modulus	9.40 GPa	1360 ksi	ISO 178
Izod Impact, Notched (ISO)	13.0 kJ/m <sup>2</sup>	6.19 ft-lb/in <sup>2</sup>	ISO 180
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	19.0 kJ/m <sup>2</sup>	9.04 ft-lb/in <sup>2</sup>	ISO 180
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	9.00 J/cm <sup>2</sup>	42.8 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.50 J/cm <sup>2</sup>	45.2 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.40 J/cm <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	2.00 J/cm <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	

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