

Ascend Performance Materials Vydyne® R543H Black Nylon 66, 43% Glass Reinforced, Conditioned

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

Material Notes:

Vydyne® R543H Black is general-purpose, hydrolysis-resistant, 43% glass-fiber reinforced PA66 resin. Available in black, it is an injection-molding grade resin that is lubricated for machine feed, flow and mold release. Glass-reinforced Vydyne resins provide higher heat distortion temperature, 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 solvents, gasoline, hydraulic fluids, greases and machine oils. Vydyne R543H Black 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 Black 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 Black provides improved retention of physical properties under exposure to long term heat. The continuous operating use temperature is 275°F, with short-term peak temperatures as high as 475°F. Availability:Asia PacificEuropeNorth AmericaFiller/Reinforcement:Glass Fiber, 43% Filler by WeightAdditive:Heat StabilizerLubricant Features:Gasoline ResistanceGood Chemical ResistanceGood Creep ResistanceGood Dimensional StabilityGood FlowGood Impact ResistanceGood Mold ReleaseGrease ResistantHeat Stabilized High RigidityHigh StrengthHigh Tensile StrengthHydrolysis Resistant LubricatedOil ResistantSolvent Resistant Uses: Automotive Under the HoodGearsHousingsLawn and Garden EquipmentPower/Other Tools Appearance: BlackForms: 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-R543H-Black-Nylon-66-43-Glass-Reinforced-Conditioned.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|-----------------------------------|-------------------------------------|----------------|
| Density | 1.50 g/cc | 0.0542 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 at Break | 170 MPa | 24700 psi | ISO 527-2 |
| Elongation at Break | 4.0 % | 4.0 % | ISO 527-2 |

| Mechanical Properties | Metric ¹ | English ¹ | 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 ² | 6.19 ft-lb/in ² | ISO 180 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact Unnotched | 19.0 kJ/m ² | 9.04 ft-lb/in ² | ISO 180 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| Charpy Impact Unnotched | 9.00 J/cm ² | 42.8 ft-lb/in ² | ISO 179 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact Unnotched | 9.50 J/cm ² | 45.2 ft-lb/in ² | ISO 179 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| Charpy Impact, Notched | 1.40 J/cm ² | 6.66 ft-lb/in ² | ISO 179 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact, Notched | 2.00 J/cm ² | 9.52 ft-lb/in ² | ISO 179 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

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