

## Ascend Performance Materials Vydyne® R533H BK02 Nylon 66, 33% Glass Reinforced, Conditioned

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

### Material Notes:

Vydyne® R533H BK02 is 33% glass-fiber reinforced, heat-stabilized PA66 resin. Available in black, it is specifically designed to maximize the retention of physical properties when exposed to anti-freeze solutions at elevated temperatures. This product is lubricated for improved machine feed and flow. Glass-reinforced Vydyne resins provide 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 R33H BK02 is heat-stabilized to minimize oxidative degradation of the polymer when exposed to elevated temperatures in service. This product provides improved retention of physical properties under exposure to long-term heat. Also, Vydyne R533H BK02 has excellent knit-line strength and fatigue resistance, which is essential for cycle testing with anti-freeze solutions. Typical Applications/End Uses: Vydyne R533H BK02 has been used for several under-the-hood automotive applications. The hydrolysis-resistant properties make it an excellent candidate for radiator end tank and heater core applications. Availability:Asia PacificEuropeNorth AmericaFiller/Reinforcement:Glass Fiber, 33% Filler by WeightAdditive:Heat StabilizerLubricant Features: Good Mold ReleaseHeat StabilizedHigh FlowHigh RigidityHigh Strength Lubricated Uses: Automotive Under the HoodGearsHousingsPower/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-R533H-BK02-Nylon-66-33-Glass-Reinforced-Conditioned.php](http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-R533H-BK02-Nylon-66-33-Glass-Reinforced-Conditioned.php)

| Physical Properties                | Metric                            | English                             | Comments       |
|------------------------------------|-----------------------------------|-------------------------------------|----------------|
| Density                            | 1.40 g/cc                         | 0.0506 lb/in <sup>3</sup>           | ISO 1183       |
| Water Absorption                   | 0.80 %<br>@Time 86400 sec         | 0.80 %<br>@Time 24.0 hour           | ISO 62         |
| Moisture Absorption at Equilibrium | 1.7 %                             | 1.7 %                               | 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow        | 0.0040 cm/cm<br>@Diameter 2.00 mm | 0.0040 in/in<br>@Diameter 0.0787 in | ISO 294-4      |
| Linear Mold Shrinkage, Transverse  | 0.0090 cm/cm<br>@Diameter 2.00 mm | 0.0090 in/in<br>@Diameter 0.0787 in | ISO 294-4      |

| 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<br>Mechanical Properties | 200 MPa<br>Metric      | 29000 psi<br>English       | ISO 178<br>Comments |
|--|------------------------|----------------------------|---------------------|
| Flexural Modulus                           | 6.50 GPa               | 943 ksi                    | ISO 178             |
| Izod Impact, Notched (ISO)                 | 12.0 kJ/m <sup>2</sup> | 5.71 ft-lb/in <sup>2</sup> | ISO 180             |
|  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                     |
|  | 14.0 kJ/m <sup>2</sup> | 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> | 40.4 ft-lb/in <sup>2</sup> | ISO 179/1eU         |
|  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                     |
|  | 9.00 J/cm <sup>2</sup> | 42.8 ft-lb/in <sup>2</sup> | ISO 179/1eU         |
|  | @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 179/1eA         |
|  | @Temperature -30.0 °C  | @Temperature -22.0 °F      |                     |
|  | 1.40 J/cm <sup>2</sup> | 6.66 ft-lb/in <sup>2</sup> | ISO 179/1eA         |
|  | @Temperature 23.0 °C   | @Temperature 73.4 °F       |                     |

## Contact Songhan Plastic Technology Co.,Ltd.

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