

Ascend Performance Materials VYDYNE® R400G Nylon, Mineral and Glass Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Glass/Mineral Filled

Material Notes:

Typical property data. VYDYNE is a registered trademark of Solutia Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-VYDYNE-R400G-Nylon-Mineral-and-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	ASTM D792
Water Absorption	0.80 %	0.80 %	24 hours; ASTM D570
Linear Mold Shrinkage	0.0050 - 0.010 cm/cm	0.0050 - 0.010 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	98	98	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength, Yield	114 MPa	16500 psi	ASTM D638
Elongation at Break	7.0 %	7.0 %	ASTM D638
Tensile Modulus	6.70 GPa	972 ksi	D638
Flexural Yield Strength	184 MPa	26700 psi	ASTM D790
Flexural Modulus	6.80 GPa	986 ksi	ASTM D790
Poissons Ratio	0.26	0.26	
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.38	0.38	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.42	0.42	
	@Temperature 66.0 °C	@Temperature 151 °F	
	0.47	0.47	
	@Temperature 121 °C	@Temperature 250 °F	
Shear Modulus	2.43 GPa	352 ksi	Calculated
Izod Impact, Notched	0.400 J/cm	0.749 ft-lb/in	ASTM D256

Mechanical Properties	@Thickness 3.17 mm Metric	@Thickness 0.125 in English	Comments
Coefficient of Friction	0.26	0.26	ASTM D1894
Coefficient of Friction, Static	0.34	0.34	ASTM D1894

Thermal Properties	Metric	English	Comments
CTE, linear	31.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	17.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature -40.0 - 82.0 $^\circ\text{C}$	@Temperature -40.0 - 180 $^\circ\text{F}$	
Specific Heat Capacity	1.50 J/g- $^\circ\text{C}$	0.359 BTU/lb- $^\circ\text{F}$	Mfr. internal test
Thermal Conductivity	0.390 W/m-K	2.71 BTU-in/hr-ft ² - $^\circ\text{F}$	Mfr. internal test
Melting Point	255 $^\circ\text{C}$	491 $^\circ\text{F}$	ASTM D1525
Deflection Temperature at 1.8 MPa (264 psi)	218 $^\circ\text{C}$	424 $^\circ\text{F}$	Unannealed; ASTM D648
	@Thickness 3.17 mm	@Thickness 0.125 in	
Flammability, UL94	HB	HB	

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