

Ascend Performance Materials Vydyne® R228 Nylon 66, 40% Mineral Reinforced, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 40% Mineral Filled

Material Notes:

Vydyne® R228 is a 40% mineral-reinforced PA66 resin formulated for improved impact strength. Available in black, it is an injection-molding grade formulated to retain the inherent processing advantages of unreinforced PA66 while enhancing rigidity, strength and heat resistance. Vydyne R228 maintains the chemical resistance typical of PA66 to a wide variety of chemicals, gasoline, oils, greases and solvents. Vydyne R228 resin utilized a unique mineral-reinforced PA66 system developed by Ascend Performance Materials to satisfy the market need for a high-rigidity thermoplastic as an alternative to certain metals. This mineral system provides two key features: (1) isotropic behavior-property development in molded parts is usually impendent of flow direction. (2) a reduction in the tendency to develop sink marks in heavy cross sections such as molded-in bosses and ribs. While not sink-free, parts made from Vydyne R228 can often permit boss and rib design or wall cross section changes that would not be tolerable in other unreinforced thermoplastic materials. Thus Vydyne R228 resin offers more uniform molded part strength and performance, as well as wider latitude in part design. Vydyne R228 resin is a workhorse of Ascend Performance Materials' full line of mineral-reinforced PA66 resins, providing the best overall balance of properties. Vydyne R228 is heat stabilized and designed to provide increased ductility improvement results in tougher, more impact-resistant molded parts. The reduction in melt viscosity enhances overall ease of injection-molding, resulting in minor reduction in tensile strength, modulus and heat distortion temperature. Parts manufacture from Vydyne R228 have successfully withstood paint bake oven cycles without significant loss of either dimensional stability or part properties. Availability: Asia Pacific Europe North America Filler/Reinforcement: Mineral, 40% Filler by Weight Additive: Heat Stabilizer Features: Ductile Gasoline Resistance Good Chemical Resistance Good Impact Resistance Good Strength Good Toughness Grease Resistant Heat Stabilized High Heat Resistance High Rigidity Oil Resistant Solvent Resistant Uses: Automotive Exterior Parts Automotive Under the Hood Cams Gears Housings Industrial Applications Power/Other Tools Appearance: Black Forms: Pellets Processing Method: Injection Molding Information provided by Ascend Performance Materials.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-R228-Nylon-66-40-Mineral-Reinforced-DAM.php

Physical Properties	Metric	English	Comments
Density	1.48 g/cc	0.0535 lb/in ³	ISO 1183
Water Absorption	1.1 % @Time 86400 sec	1.1 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	1.6 %	1.6 %	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.011 cm/cm @Diameter 2.00 mm	0.011 in/in @Diameter 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.010 cm/cm @Diameter 2.00 mm	0.010 in/in @Diameter 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	103 MPa	14900 psi	ISO 527-2
Elongation at Break	6.0 %	6.0 %	ISO 527-2
Elongation at Yield	1.5 %	1.5 %	ISO 527-2
Tensile Modulus	6.90 GPa	1000 ksi	ISO 527-2
Flexural Strength	124 MPa	18000 psi	ISO 178
Flexural Modulus	6.10 GPa	885 ksi	ISO 178
Poissons Ratio	0.40	0.40	ISO 527
Izod Impact, Notched (ISO)	7.00 kJ/m ²	3.33 ft-lb/in ²	ISO 180
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.00 kJ/m ²	4.28 ft-lb/in ²	ISO 180
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	11.0 J/cm ²	52.3 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	14.0 J/cm ²	66.6 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.700 J/cm ²	3.33 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	63.0 µm/m-°C	35.0 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	60.0 µm/m-°C	33.3 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	258 °C	496 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	222 °C	432 °F	Unannealed; ISO 75-2/B

Thermal Properties	Metric	English	Comments
Thermal Distortion Temperature at 1.8 MPa (264 psi)	118 °C	243 °F	Unannealed; ISO 75-2/A

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