

Vydyne® R860 BK02

polyamide 66



Vydyne R860 BK02 is general-purpose, glass-fiber and mineral-reinforced PA66 resin. Available in black, this product is also lubricated for improved flow and offers superior surface appearance.

Glass fiber and mineral-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.

Typical Applications/End Uses:

Vydyne R860 BK02 can be successfully used in a wide range of injection-molding engineering applications. Typical parts include automotive clips, radiator shrouds, fans and mirror brackets; electrical connectors, housings and bobbins; and industrial applications such as gears, bearing shells, covers and housings.

General				
Material Status	• Commercial: Active			
Availability	• Asia Pacific	• Europe	• North America	
Filler / Reinforcement	• Glass Fiber	• Mineral		
Additive	• Lubricant			
Features	• Good Mold Release • High Rigidity	• High Strength • High Tensile Strength	• Lubricated • Outstanding Surface Finish	
Uses	• Automotive Under the Hood • Bearings	• Connectors • Housings		
Agency Ratings	• ASTM D4066 PA114R35	• ASTM D6779 PA084R35		
Automotive Specifications	• BOSCH VDA EMPB • CHRYSLER MS-DB-41 CPN 2554	• FORD ESB-M4D353-A7 • GM GMP.PA66.003	• GM GMP.PA66.042R • HYUNDAI MS211-47 Type C	
UL File Number	• E70062			
Appearance	• Black			
Forms	• Pellets			
Processing Method	• Injection Molding			

Physical	Dry	Conditioned	Unit	Test Method
Density	1.47	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.80	--	%	
Flow : 23°C, 2.00 mm	0.25	--	%	
Water Absorption				ISO 62
24 hr, 23°C	0.60	--	%	
Equilibrium, 23°C, 50% RH	2.0	--	%	

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	10000	5900	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	120	90.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.5	2.8	%	ISO 527-2
Flexural Modulus (23°C)	9000	4500	MPa	ISO 178
Flexural Stress (23°C)	190	97.0	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-30°C	3.8	6.0	kJ/m ²	
23°C	4.4	10	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179
-30°C	43	60	kJ/m ²	
23°C	48	56	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	4.6	6.5	kJ/m ²	
23°C	5.6	10	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	230	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	215	--	°C	ISO 75-2/A
Melting Temperature	255	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	2.4E-4	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	6.9E-4	--	cm/cm/°C	
Injection	Dry Unit			
Drying Temperature	80 °C			
Drying Time	4.0 hr			
Suggested Max Re grind	25 %			
Rear Temperature	280 to 310 °C			
Middle Temperature	280 to 310 °C			
Front Temperature	280 to 310 °C			
Nozzle Temperature	280 to 310 °C			
Processing (Melt) Temp	285 to 305 °C			
Mold Temperature	65 to 95 °C			

Notes

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