

# Vydyne® R535HT BK653 polyamide 66



Vydyne R535HT BK653 is a 35% glass-filled, heat-stabilized PA66 based resin. Available in black, this product is also lubricated for improved flow and offers superior surface appearance. Specifically

designed for high-temperature applications, Vydyne R535HT BK653 can withstand elevated temperatures up to 190°C for an extended period of time.

General				
Material Status	• Commercial: Active			
Availability	• Asia Pacific	• Europe	• North America	
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight			
Additive	• Heat Stabilizer	• Lubricant		
Features	• Antifreeze Resistant • Chemical Resistant • Fatigue Resistant	• Gasoline Resistant • Heat Stabilized • High Flow	• Lubricated • Solvent Resistant	
Uses	• Automotive Under the Hood	• Charge Air Systems	• High Temperature Applications	
Agency Ratings	• ASTM D4066 PA114G35	• ASTM D6779 PA084G35		
Automotive Specifications	• RENAULT AS23a			
UL File Number	• E70062			
Appearance	• Black			
Forms	• Pellets			
Processing Method	• Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.42	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 2.00 mm	0.90	--	%	
Flow : 2.00 mm	0.40	--	%	
Water Absorption				ISO 62
24 hr, 23°C	0.80	--	%	
Equilibrium, 23°C, 50% RH	1.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	11200	7800	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	200	130	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.2	3.0	%	ISO 527-2
Flexural Modulus (23°C)	10200	6300	MPa	ISO 178
Flexural Stress (23°C)	280	145	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	11	12	kJ/m <sup>2</sup>	
23°C	12	18	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	65	75	kJ/m <sup>2</sup>	
23°C	75	85	kJ/m <sup>2</sup>	
Notched Izod Impact Strength				ISO 180
-30°C	13	13	kJ/m <sup>2</sup>	
23°C	14	18	kJ/m <sup>2</sup>	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	256	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	240	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	1.9E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	8.1E-5	--	cm/cm/°C	
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (2.00 mm, Self-Extinguishing)	0.0	--	mm/min	ISO 3795
Injection	Dry Unit			
Drying Temperature	80 °C			
Drying Time	4.0 hr			
Suggested Max Regrind	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

Typical properties: these are not to be construed as specifications.

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