

# Vydyne® R530HR BK652

## polyamide 66



Vydyne R530HR is specifically formulated to give superior hydrolysis resistance for demanding automotive cooling system components. This product has demonstrated more than twice the tensile strength and elongation retention of standard 30%

glass-fiber reinforced PA66 after 3,500 hours of aging in automotive coolant at 120° C. Vydyne R530HR demonstrates similar property retention benefits at 130° C for 1,000 hours of coolant aging as well.

General	
Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Antifreeze Resistant • Gasoline Resistant • Lubricated • Chemical Resistant • Heat Stabilized • Solvent Resistant • Fatigue Resistant • High Flow
Uses	• Automotive Under the Hood
Agency Ratings	• ASTM D4066 PA012G30 • ASTM D6779 PA012G30
Automotive Specifications	• CHRYSLER MS-DB-41 CPN 4018 • DELPHI SD-2-181 • VOLKSWAGEN TL 52682
UL File Number	• E70062
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.90	--	%	
Flow : 23°C, 2.00 mm	0.40	--	%	
Water Absorption				ISO 62
24 hr, 23°C	0.90	--	%	
Equilibrium, 23°C, 50% RH	1.9	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9700	7700	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	185	140	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	4.0	6.5	%	ISO 527-2
Flexural Modulus (23°C)	9500	6000	MPa	ISO 178
Flexural Stress (23°C)	265	155	MPa	ISO 178
Poisson's Ratio (23°C)	0.40	--		ISO 527

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-40°C	10	10	kJ/m <sup>2</sup>	
-30°C	11	10	kJ/m <sup>2</sup>	
23°C	13	18	kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179
-40°C	85	90	kJ/m <sup>2</sup>	
-30°C	85	90	kJ/m <sup>2</sup>	
23°C	95	100	kJ/m <sup>2</sup>	
Notched Izod Impact Strength				ISO 180
-40°C	11	13	kJ/m <sup>2</sup>	
-30°C	11	13	kJ/m <sup>2</sup>	
23°C	14	17	kJ/m <sup>2</sup>	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	260	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	250	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	2.2E-5	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.1E-4	--	cm/cm/°C	
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.

<sup>1</sup> Typical properties: these are not to be construed as specifications.



North America  
+1 888 927 2363

Europe  
+32 10 608 600

Asia  
+86 21 2315 0888

Disclaimer of Warranty and Liability

NOTICE: Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Ascend Performance Materials Operations makes no representations or warranties as to the completeness or accuracy thereof.

Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Ascend Performance Materials Operations be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information or the products to which information refers. Nothing contained herein is to be construed as a recommendation to use any product, equipment or formulation in conflict with any patent, and Ascend Performance Materials Operations makes no representation or warranty, express or implied, that use thereof will not infringe any patent. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers.