

Vydyne® R525H BK0201 polyamide 66



Vydyne R525H BK0201 is hydrolysis-resistant, 25% glass-fiber reinforced, heat-stabilized PA66 resin. Available in black, it is specifically designed to maximize the retention of physical properties when exposed to anti-freeze solutions at elevated temperatures. This product is lubricated for improved machine feed and flow.

Glass-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.

Vydyne R525H BK0201 is heat-stabilized to minimize oxidative degradation of the polymer when exposed to elevated

temperatures in service. This product provides improved retention of physical properties under exposure to long-term heat. Also, Vydyne R525H BK0201 has excellent knit-line strength and fatigue resistance, which is essential for cycle testing with anti-freeze solutions.

Typical Applications/End Uses

Vydyne R525H BK0201 resin is used for under-the-hood automotive applications. Its hydrolysis-resistant properties make R525H BK0201 an excellent candidate for radiator end tank and heater core applications.

General	
Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> Asia Pacific Europe North America
Filler / Reinforcement	<ul style="list-style-type: none"> Glass Fiber, 25% Filler by Weight
Additive	<ul style="list-style-type: none"> Heat Stabilizer Lubricant
Features	<ul style="list-style-type: none"> Antifreeze Resistant Chemical Resistant Fatigue Resistant Gasoline Resistant Good Flow Heat Stabilized Hydrolysis Resistant Lubricated Solvent Resistant
Uses	<ul style="list-style-type: none"> Automotive Under the Hood
Agency Ratings	<ul style="list-style-type: none"> ASTM D4066 PA012G25 ASTM D6779 PA012G25
Automotive Specifications	<ul style="list-style-type: none"> CHRYSLER MS-DB-41 CPN4098 DELPHI SD-2-227 FORD WSK-M4D641-A GM GMP.PA66.046 GM GMP.PA66.083 GM GMW16270P-PA66-GF25 GM GMW3038P-PA66-GF25H GM GMW3038P-PA66-GF25J GM QK 003012 H VALEO PDT NVB 15009-2
Appearance	<ul style="list-style-type: none"> Black
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> Injection Molding

Vydyne® R525H BK0201
polyamide 66



Physical	Dry	Conditioned	Unit	Test Method
Density	1.32	--	g/cm ³	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	2.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	8600	5500	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	174	117	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.0	7.0	%	ISO 527-2
Flexural Modulus (23°C)	7700	5700	MPa	ISO 178
Flexural Stress (23°C)	250	150	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	10	10	kJ/m ²	
23°C	11	12	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	55	66	kJ/m ²	
23°C	65	67	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	9.0	10	kJ/m ²	
23°C	10	15	kJ/m ²	

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	258	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	245	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	2.5E-5	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.1E-4	--	cm/cm/°C	
RTI Elec				UL 746
0.75 mm	140	--	°C	
1.5 mm	140	--	°C	
3.0 mm	140	--	°C	
RTI Imp				UL 746
0.75 mm	120	--	°C	
1.5 mm	120	--	°C	
3.0 mm	120	--	°C	
RTI Str				UL 746
0.75 mm	125	--	°C	
1.5 mm	140	--	°C	
3.0 mm	140	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.750 mm)	1.0E+13	--	ohms-cm	IEC 60093
Dielectric Strength (1.00 mm)	20	--	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	PLC 6	--		ASTM D495
Comparative Tracking Index (3.00 mm)	250 to 399	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.75 mm	PLC 0	--		
1.5 mm	PLC 0	--		
3.0 mm	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.75 mm	PLC 4	--		
1.5 mm	PLC 3	--		
3.0 mm	PLC 4	--		

Vydyne® R525H BK0201
polyamide 66



Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (2.00 mm, Self-Extinguishing)	0.0	--	mm/min	ISO 3795
Flame Rating				UL 94
0.75 mm	HB	--		
1.5 mm	HB	--		
3.0 mm	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.75 mm	675	--	°C	
1.5 mm	675	--	°C	
3.0 mm	675	--	°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.75 mm	700	--	°C	
1.5 mm	700	--	°C	
3.0 mm	700	--	°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.

¹ 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.