

Vydyne® R530H BK0201 polyamide 66



Vydyne R530H BK0201 is general-purpose, heat-stabilized, hydrolysis-resistant, 30% glass-fiber reinforced 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 also 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 R530H 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 R530H BK0201 has excellent knit-line strength and fatigue resistance, which is essential for cycle testing with anti-freeze solutions.

Typical Applications/End Uses:

Vydyne R530H BK0201 has been used for several under-the-hood automotive applications. The hydrolysis-resistant properties make it an excellent candidate for radiator end tank and heater core applications.

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	• Good Chemical Resistance	• Hydrolysis Resistant	
	• Fatigue Resistant	• Good Flow	• Lubricated	
	• Gasoline Resistance	• Heat Stabilized	• Solvent Resistant	
Uses	• Automotive Under the Hood			
Agency Ratings	• ASTM D 4066 PA0121G30	• ASTM D 6779 PA0121G30		
Automotive Specifications	• CHRYSLER MS-DB-41 CPN4018	• FORD WSK-M4D752-A	• OPEL QK 003013 HW	
	• DAEWOO EDS-M-5164-11	• GM GMP.PA66.040	• TagAZ TAMS-8723-01	
	• FORD WSK-M4D642-A	• GM		
	• FORD WSK-M4D642-A2	• GMW3038P-PA66-GF30H		
UL File Number	• E70062			
Appearance	• Black			
Forms	• Pellets			
Processing Method	• Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	0.90	--	%	
Flow : 73°F, 0.0787 in	0.40	--	%	
Water Absorption (73°F, 24 hr)	0.90	--	%	ISO 62
Water Absorption (Equilibrium, 50% RH)	1.9	--	%	ISO 62

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Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.45E+6	1.07E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	28300	19600	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	5.0	%	ISO 527-2
Flexural Modulus (73°F)	1.39E+6	870000	psi	ISO 178
Flexural Stress (73°F)	39200	27600	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-22°F	4.9	5.2	ft·lb/in ²	
73°F	5.3	6.2	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
-22°F	31	38	ft·lb/in ²	
73°F	36	40	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180
-22°F	4.8	5.2	ft·lb/in ²	
73°F	5.7	6.2	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	500	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	482	--	°F	
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.2E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	5.9E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746
0.0295 in	284	--	°F	
0.0591 in	284	--	°F	
0.118 in	284	--	°F	
RTI Imp				UL 746
0.0295 in	248	--	°F	
0.0591 in	248	--	°F	
0.118 in	248	--	°F	
RTI Str				UL 746
0.0295 in	257	--	°F	
0.0591 in	284	--	°F	
0.118 in	284	--	°F	

Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.118 in)	1.0E+13	--	ohm-cm	IEC 60093
Dielectric Strength (0.0394 in)	510	--	V/mil	IEC 60243
Arc Resistance (0.118 in)	PLC 6	--		ASTM D495
Comparative Tracking Index (0.118 in)	250 to 399	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.0295 in	PLC 0	--		
0.0591 in	PLC 0	--		
0.118 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.0295 in	PLC 4	--		
0.0591 in	PLC 3	--		
0.118 in	PLC 4	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.0295 in	HB	--		
0.0591 in	HB	--		
0.118 in	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.0295 in	1250	--	°F	
0.0591 in	1250	--	°F	
0.118 in	1250	--	°F	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.0295 in	1290	--	°F	
0.0591 in	1290	--	°F	
0.118 in	1290	--	°F	
Injection		Dry	Unit	
Drying Temperature		176	°F	
Drying Time		4.0	hr	
Suggested Max Regrind		25	%	
Rear Temperature		536 to 590	°F	
Middle Temperature		536 to 590	°F	
Front Temperature		536 to 590	°F	
Nozzle Temperature		536 to 590	°F	
Processing (Melt) Temp		545 to 581	°F	
Mold Temperature		149 to 203	°F	

Notes

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

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