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 • Chemical Resistant • Fatigue Resistant	• Gasoline Resistant • Good Flow • Heat Stabilized	• Hydrolysis Resistant • Lubricated • Solvent Resistant
Uses	• Automotive Under the Hood • Connectors	• Fasteners • Transmission Applications	
Agency Ratings	• ASTM D4066 PA012G30	• ASTM D6779 PA012G30	
Automotive Specifications	• CHRYSLER MS-DB-41 CPN4018 • DELPHI SD-2-181 • FORD WSK-M4D642-A • FORD WSK-M4D642-A2 • FORD WSK-M4D752-A • GM GMP.PA66.040	• GM GMW16270P-PA66-GF30 • GM GMW3038P-PA66-GF30H • GM GMW3038P-PA66-GF30J • GM QK 003013 HW • HYUNDAI MS211-47 Type A2 • PSA Peugeot-Citroën FTM64-0046	• RENAULT AS22 • RENAULT AS26 • VALEO PDT NVB 15009-3 • 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/cm³	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)	10000	8400	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	195	135	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	3.0	5.0	%	ISO 527-2
Flexural Modulus (23°C)	9600	6000	MPa	ISO 178
Flexural Stress (23°C)	270	190	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	9.0	9.5	kJ/m²	
-30°C	9.5	10	kJ/m²	
23°C	11	13	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179
-40°C	65	72	kJ/m²	
-30°C	65	72	kJ/m²	
23°C	75	90	kJ/m²	
Notched Izod Impact Strength				ISO 180
-40°C	--	10	kJ/m²	
-30°C	10	10	kJ/m²	
23°C	12	13	kJ/m²	

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	
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 (3.00 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	--		

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

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