

Vydyne® R535J BK0701

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

R535J BK0701 is a black, 35% glass-filled, high-flow PA66 that is heat-stabilized with an electrically neutral heat stabilizer. It is specially designed for electrical applications requiring high dielectric strength, low conductivity and corrosion resistance.

General Information				
Filler / Reinforcement		Glass Fiber,35% Filler by Weight		
Additive		Lubricant		
Features		Good Chemical Resistance		
		Good Colorability		
		Good Corrosion Resistance		
		Good Electrical Properties		
		Good Mold Release		
		Heat Stabilized		
		High Flow		
		High Strength		
		Laser Markable		
Uses		Lubricated		
		Appliance Components		
		Automotive Applications		
		Connectors		
		Electrical/Electronic Applications		
		Engineered Applications		
		Lighting Applications		
		Living Hinges		
		Thin-walled Parts		
Agency Ratings		ASTM D 4066 PA011G35		
		ASTM D 6779 PA011G35		
UL File Number		E70062		
Appearance		Black		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.41	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4

Across Flow : 2.00 mm	0.90	--	%	
Flow : 2.00 mm	0.40	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	
Equilibrium, 23°C, 50% RH	1.6	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	11600	--	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	209	--	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.8	--	%	ISO 527-2
Flexural Modulus (23°C)	10500	--	MPa	ISO 178
Flexural Strength (23°C)	300	--	MPa	ISO 178
Poisson's Ratio (23°C)	0.40	--		ISO 527
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	11	--	kJ/m ²	
23°C	12	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	68	--	kJ/m ²	
23°C	79	--	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	11	--	kJ/m ²	
23°C	12	--	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	261	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	251	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	2.1E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	1.1E-4	--	cm/cm/°C	
RTI Elec				UL 746
0.750 mm	120	--	°C	
1.50 mm	120	--	°C	
3.00 mm	120	--	°C	
RTI Imp				UL 746
0.750 mm	85.0	--	°C	
1.50 mm	85.0	--	°C	
3.00 mm	105	--	°C	
RTI Str				UL 746

0.750 mm	115	--	°C	
1.50 mm	120	--	°C	
3.00 mm	120	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.750 mm)	1.0E+13	--	ohms·cm	IEC 60093
Dielectric Strength (1.00 mm)	24	--	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	PLC 5	--		ASTM D495
Comparative Tracking Index (3.00 mm)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.750 mm	PLC 0	--		
1.50 mm	PLC 0	--		
3.00 mm	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.750 mm	PLC 4	--		
1.50 mm	PLC 4	--		
3.00 mm	PLC 4	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	HB	--		
1.50 mm	HB	--		
3.00 mm	HB	--		
Additional Information	Dry	Conditioned		Test Method
Automotive Materials - (thickness d = 1mm)	+	--		FMVSS 302
Injection	Dry	Unit		
Drying Temperature	80.0		°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	65.0 to 95.0		°C	

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