

# Vydyne® R535J BK0678

## polyamide 66



R535J BK0678 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.

Typical Applications/End Uses:  
To come

General	
Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight
Additive	• Lubricant
Features	• Antifreeze Resistant • Good Chemical Resistance • Laser Markable • Fatigue Resistant • Good Flow • Lubricated • Gasoline Resistance • Hydrolysis Resistant • Solvent Resistant
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 (73°F)	1.41	--	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 0.0787 in	0.90	--	%	
Flow : 0.0787 in	0.40	--	%	
Water Absorption (73°F, 24 hr)	0.80	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.6	--	%	ISO 62

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.68E+6	--	psi	ISO 527-2
Tensile Stress (Break, 73°F)	30300	--	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.8	--	%	ISO 527-2
Flexural Modulus (73°F)	1.52E+6	--	psi	ISO 178
Flexural Strength (73°F)	43500	--	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	5.2	--	ft·lb/in <sup>2</sup>	
73°F	5.7	--	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	32	--	ft·lb/in <sup>2</sup>	
73°F	38	--	ft·lb/in <sup>2</sup>	
Notched Izod Impact Strength				ISO 180
-22°F	5.2	--	ft·lb/in <sup>2</sup>	
73°F	5.7	--	ft·lb/in <sup>2</sup>	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
66 psi, Unannealed	502	--	°F	
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	484	--	°F	
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F)	1.2E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	5.9E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746
0.0295 in	248	--	°F	
0.0591 in	248	--	°F	
0.118 in	248	--	°F	
RTI Imp				UL 746
0.0295 in	185	--	°F	
0.0591 in	185	--	°F	
0.118 in	221	--	°F	
RTI Str				UL 746
0.0295 in	239	--	°F	
0.0591 in	248	--	°F	
0.118 in	248	--	°F	

Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0295 in)	1.0E+13	--	ohm·cm	IEC 60093
Dielectric Strength (0.0394 in)	610	--	V/mil	IEC 60243
Arc Resistance (0.118 in)	PLC 5	--		ASTM D495
Comparative Tracking Index (0.118 in)	600	--	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 4	--		
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	--		
Additional Information	Dry	Conditioned	Unit	Test Method
Automotive Materials - (thickness d = 1mm)	+	--		FMVSS 302
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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