

Vydyne® R535J BK0701

Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne 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

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Chemical Resistant • Good Mold Release • High Strength • Corrosion Resistant • Heat Stabilized • Lubricated • Good Colorability • Heat Stabilized - Organic • Good Electrical Properties • High Flow
Agency Ratings	• ASTM D4066 PA012G35 • ASTM D6779 PA012G35
UL File Number	• E70062
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-GF35

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.41	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 (24 hr, 73°F)	0.80	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.6	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	1.68E+6	psi	ISO 527-1
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 Stress (73°F)	43500	psi	ISO 178
Poisson's Ratio (73°F)	0.40		ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	5.2	ft·lb/in ²	
73°F	5.7	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	32	ft·lb/in ²	
73°F	38	ft·lb/in ²	
Notched Izod Impact Strength			ISO 180/1A
-22°F	5.2	ft·lb/in ²	
73°F	5.7	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	502	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	484	°F	ISO 75-2/A
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 746B
0.030 in	248 °F	
0.06 in	248 °F	
0.12 in	248 °F	
RTI Imp		UL 746B
0.030 in	212 °F	
0.06 in	212 °F	
0.12 in	221 °F	
RTI Str		UL 746B
0.030 in	257 °F	
0.06 in	257 °F	
0.12 in	257 °F	

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (0.0394 in)	1.0E+14	ohms·cm	IEC 60093
Electric Strength (0.0394 in)	510	V/mil	IEC 60243-1
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 746A
0.030 in	PLC 0		
0.06 in	PLC 0		
0.12 in	PLC 0		
High Voltage Arc Tracking Rate (HVTR) (0.118 in)	PLC 1		UL 746A
Hot-wire Ignition (HWI)			UL 746A
0.030 in	PLC 4		
0.06 in	PLC 4		
0.12 in	PLC 3		

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.030 in	HB		
0.06 in	HB		
0.12 in	HB		
Glow Wire Flammability Index			IEC 60695-2-12
0.030 in	1380	°F	
0.06 in	1340	°F	
0.12 in	1470	°F	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.030 in	1430	°F	
0.06 in	1340	°F	
0.12 in	1380	°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time	4.0	hr
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

