Vydyne® R535J BK0678

polyamide 66

Vydyne R535J BK0678 is a black, 35% glass filled, high flow, PA66 that contains an electrically neutral heat stabilizer. It is specifically designed for electrical applications requiring high dielectric strength, low conductivity, corrosion resistance, and laser markability.

General

Additive	• Heat Stabilizer	• Lubricant	
Features	• Chemical Resistant	• Corrosion Resistant	• Good Colorability
	• Good Electrical Properties	• Good Mold Release	• High Flow
	• High Strength	• Laser Markable	• Lubricated
	• Organic Heat Stabilized		
Agency Rating	• ASTM, D4066 PA012G35	• ASTM, D6779 PA012G35	
Automotive Specifications	• Aptiv M5600V		
UL File Number	• E70062		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	dry	cond.	Unit	Test Standard
Density	1.41	-	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.9	*	%	
Flow : 23°C, 2.00 mm	0.4	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.8	*	%	
Equilibrium, 23°C, 50% RH	1.6	*	%	

Mechanical	dry	cond.	Unit	Test Standard
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)	0.4			ISO 527-2

Impact	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	12	-	kJ/m²	
-30°C	11	-	kJ/m²	

Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	79	-	kJ/m²	
-30°C	68	-	kJ/m²	
Notched Izod Impact Strength				ISO 180/1A
+23°C	12	-	kJ/m²	
-30°C	11	-	kJ/m²	

Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	251	-	°C	
0.45 MPa, Unannealed	261	-	°C	
Melting Temperature	260	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	21	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	106	*	E-6/K	
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	100		°C	
1.50mm	100		°C	
3.00 mm	105		°C	
RTI Str				UL 746
0.750 mm	125		°C	
1.50 mm	125		°C	
3.00 mm	125		°C	

Electrical	dry	cond.	Unit	Test Standard
Volume Resistivity (1.00 mm)	1E12	-	Ohm*m	IEC 60093
Dielectric Strength (1.00 mm)	27	20	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	5			ASTM D 495
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), 3.00 mm	PLC 1			UL 746
Hot-wire Ignition (HWI)				UL 746

0.750 mm	PLC 4
1.50 mm	PLC 4
3.00 mm	PLC 3

Flammability	Value	Unit	Test Standard
Flammability			UL 94
0.750 mm	HB		
1.50 mm	HB		
3.00 mm	HB		
Glow Wire Flammability Index			IEC 60695-2-12
0.750 mm	750	°C	
1.50 mm	725	°C	
3.00 mm	800	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.750 mm	775	°C	
1.50 mm	725	°C	
3.00 mm	750	°C	

Injection	Value	Unit
Drying Temperature	80	°C
Drying Time	4	h
Rear Temperature	280 - 310	°C
Middle Temperature	280 - 310	°C
Front Temperature	280 - 310	°C
Nozzle temperature	280 - 310	°C
Processing (Melt) Temperature	285 - 305	°C
Mold Temperature	65 - 95	°C

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