

Vydyne® R515J BK0690

Ascend Performance Materials Operations LLC - Polyamide 66

General Information

Product Description

Vydyne R515J BK0690 is a black, 15% 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

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight
Additive	• Heat Stabilizer • Lubricant
Features	• Chemical Resistant • Good Mold Release • High Strength • Corrosion Resistant • Heat Stabilized • Laser Markable • Good Colorability • Heat Stabilized - Organic • Lubricated • Good Electrical Properties • High Flow
Agency Ratings	• ASTM D4066 PA012G15 • ASTM D6779 PA012G15
UL File Number	• E70062
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID	• PA66-GF15

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.24	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.1	--	%	
Flow : 73°F, 0.0787 in	0.70	--	%	
Water Absorption (24 hr, 73°F)	1.3	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.9	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	827000	682000	psi	ISO 527-1
Tensile Stress (Break, 73°F)	16700	11900	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.3	3.0	%	ISO 527-2
Flexural Modulus (73°F)	856000	551000	psi	ISO 178
Flexural Stress (73°F)	24800	14600	psi	ISO 178
Poisson's Ratio (73°F)	0.36	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-40°F	2.1	2.0	ft·lb/in ²	
-22°F	2.1	2.1	ft·lb/in ²	
73°F	2.3	2.3	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-40°F	13	13	ft·lb/in ²	
-22°F	13	13	ft·lb/in ²	
73°F	14	23	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-40°F	2.0	1.8	ft·lb/in ²	
-22°F	2.0	1.8	ft·lb/in ²	
73°F	2.0	2.0	ft·lb/in ²	



Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	498	498	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	469	460	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.7E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	4.3E-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	185	--	°F	
0.06 in	185	--	°F	
0.12 in	221	--	°F	
RTI Str				UL 746B
0.030 in	239	--	°F	
0.06 in	248	--	°F	
0.12 in	248	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.0394 in)	1.0E+13	--	ohms·cm	IEC 60093
Electric Strength (0.0394 in)	690	610	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 4	--		
0.06 in	PLC 4	--		
0.12 in	PLC 4	--		
High Voltage Arc Tracking Rate (HVTR) (0.118 in)	PLC 1	--		UL 746A
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.030 in	HB	--		
0.06 in	HB	--		
0.12 in	HB	--		

Processing Information

Injection	Dry	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

