

**Vydyne® R515J NT0689**

Ascend Performance Materials Operations LLC - Polyamide 66

**General Information**
**Product Description**

Vydyne R515J NT0689 is a natural, 15% 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, 15% 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 PA012G15	• EC 1935/2004	• EU 2023/2006
	• ASTM D6779 PA012G15	• EU 10/2011	• FDA 21 CFR 177.1500
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-GF15		

**Properties <sup>1</sup>**

Physical	Nominal Value	Unit	Test Method
Density	1.24	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow : 73°F, 0.0787 in	1.0	%	
Flow : 73°F, 0.0787 in	0.50	%	
Water Absorption (24 hr, 73°F)	1.0	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.2	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	957000	psi	ISO 527-1
Tensile Stress (Break, 73°F)	17400	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	%	ISO 527-2
Flexural Modulus (73°F)	856000	psi	ISO 178
Flexural Stress (73°F)	24700	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	2.9	ft·lb/in <sup>2</sup>	
73°F	2.9	ft·lb/in <sup>2</sup>	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	15	ft·lb/in <sup>2</sup>	
73°F	16	ft·lb/in <sup>2</sup>	
Notched Izod Impact Strength			ISO 180/1A
-22°F	2.9	ft·lb/in <sup>2</sup>	
73°F	2.9	ft·lb/in <sup>2</sup>	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	496	°F	ISO 75-2/B



Deflection Temperature Under Load (264 psi, Unannealed)	466 °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)	6.2E-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	

<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Volume Resistivity (0.0394 in)	1.0E+13	ohms·cm	IEC 60093
Electric Strength (0.0394 in)	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
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating			UL 94
0.030 in	HB		
0.06 in	HB		
0.12 in	HB		

### Processing Information

<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>
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

