

Vydyne® R525J NT0721

Ascend Performance Materials Operations LLC - Polyamide 66

General Information

Product Description

Vydyne R525J NT0721 is a natural, 25% 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, 25% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Chemical Resistant • Corrosion Resistant • Good Colorability • Good Electrical Properties	• Good Mold Release • Heat Stabilized • Heat Stabilized - Organic • High Flow	• High Strength • Laser Markable
Agency Ratings	• ASTM D4066 PA012G25	• ASTM D6779 PA012G25	
Automotive Specifications	• TESLA TM-1006 V3 202120	• TESLA TM-1006 V3 301120	
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66-GF25		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.32	--	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)	0.90	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	2.0	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.25E+6	798000	psi	ISO 527-1
Tensile Stress (Break, 73°F)	25200	17000	psi	ISO 527-2
Tensile Strain (Break, 73°F)	3.0	7.0	%	ISO 527-2
Flexural Modulus (73°F)	1.12E+6	827000	psi	ISO 178
Flexural Stress (73°F)	36300	21800	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	4.8	4.8	ft·lb/in ²	
73°F	5.2	5.7	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	26	31	ft·lb/in ²	
73°F	31	32	ft·lb/in ²	
Notched Izod Impact Strength				ISO 180/1A
-22°F	4.3	4.8	ft·lb/in ²	
73°F	4.8	7.1	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method



Deflection Temperature Under Load (66 psi, Unannealed)	496	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	473	--	°F	ISO 75-2/A
Melting Temperature	500	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.4E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	6.1E-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)	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 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
0.016 in	PLC 4	--		
0.030 in	PLC 4	--		
0.06 in	PLC 4	--		
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

