

Vydyne® R535J NT0665

polyamide 66



R535J NT0665 is a natural, 35% glass-filled, high-flow PA66 resin 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	• Lubricant
Features	<ul style="list-style-type: none"> • Chemical Resistant • Corrosion Resistant • Good Colorability • Good Electrical Properties • Good Mold Release • Heat Stabilized • High Flow • High Strength • Laser Markable • Lubricated
Uses	<ul style="list-style-type: none"> • Appliance Components • Automotive Applications • Connectors • Electrical/Electronic Applications • Engineered Applications • Lighting Applications • Living Hinges • Thin-walled Parts
Agency Ratings	<ul style="list-style-type: none"> • ASTM D 4066 PA012G35 • ASTM D 6779 PA012G35 • EC 1935/2004 • EU 10/2011 • EU 2023/2006 • FDA 21 CFR 177.1500
UL File Number	• E70062
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.41	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 2.00 mm	0.90	--	%	
Flow : 2.00 mm	0.40	--	%	
Water Absorption (23°C, 24 hr)	0.80	--	%	ISO 62
Water Absorption (Equilibrium, 23°C, 50% RH)	1.6	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
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)	0.40	--		ISO 527

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Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	11	--	kJ/m ²	
23°C	12	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	68	--	kJ/m ²	
23°C	79	--	kJ/m ²	
Notched Izod Impact Strength				ISO 180
-30°C	11	--	kJ/m ²	
23°C	12	--	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
0.45 MPa, Unannealed	261	--	°C	
Heat Deflection Temperature				ISO 75-2/A
1.8 MPa, Unannealed	251	--	°C	
Melting Temperature	260	--	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	2.1E-5	--	cm/cm/°C	ISO 11359-2
CLTE - Transverse (23 to 55°C)	1.1E-4	--	cm/cm/°C	ISO 11359-2
RTI Elec				UL 746
0.75 mm	120	--	°C	
1.5 mm	120	--	°C	
3.0 mm	120	--	°C	
RTI Imp				UL 746
0.75 mm	100	--	°C	
1.5 mm	100	--	°C	
3.0 mm	105	--	°C	
RTI Str				UL 746
0.75 mm	125	--	°C	
1.5 mm	125	--	°C	
3.0 mm	125	--	°C	

Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.750 mm)	1.0E+14	--	ohms-cm	IEC 60093
Dielectric Strength (1.00 mm)	20	--	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	PLC 5	--		ASTM D495
Comparative Tracking Index (3.00 mm)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.75 mm	PLC 0	--		
1.5 mm	PLC 0	--		
3.0 mm	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.75 mm	PLC 4	--		
1.5 mm	PLC 4	--		
3.0 mm	PLC 3	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.75 mm	HB	--		
1.5 mm	HB	--		
3.0 mm	HB	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.75 mm	750	--	°C	
1.5 mm	725	--	°C	
3.0 mm	800	--	°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.75 mm	775	--	°C	
1.5 mm	725	--	°C	
3.0 mm	750	--	°C	
Additional Information	Dry	Conditioned	Unit	Test Method
Automotive Materials - (thickness d = 1mm)	+	--		FMVSS 302

Injection	Dry Unit
Drying Temperature	80 °C
Drying Time	4.0 hr
Suggested Max Regrind	25 %
Rear Temperature	280 to 310 °C
Middle Temperature	280 to 310 °C
Front Temperature	280 to 310 °C
Nozzle Temperature	280 to 310 °C
Processing (Melt) Temp	285 to 305 °C
Mold Temperature	65 to 95 °C

Notes

Typical properties: these are not to be construed as specifications.

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