

# Vydyne® FR350J NT0727 polyamide 66



Vydyne FR350J NT0727 is an unfilled, halogenated flame retardant PA66 designed to exceed the 775°C, zero flame, GWIT required for unattended appliance applications (IEC 60335-1). FR350J NT0727 exhibits excellent strength and ductility, allowing

increased flexibility in product design. FR350J NT0727 provides enhanced flow and is lubricated for machine feed and easy mold release. It has an Underwriters Laboratories UL94 V-0 flame classification down to 0.4mm (0.016") thick.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Additive	• Flame Retardant	• Heat Stabilizer	• Lubricant
Features	• Chemical Resistant • Corrosion Resistant • Flame Retardant • Good Electrical Properties	• Good Mold Release • Halogenated • Heat Aging Resistant • Heat Stabilized	• Homopolymer • Ignition Resistant • Lubricated
Uses	• Appliances • Automotive Electronics • Bobbins • Connectors • Electrical Housing	• Electrical Parts • Electrical/Electronic Applications • Fasteners • Industrial Applications • Lighting Applications	• Living Hinges • Printed Circuit Boards • Switches
RoHS Compliance	• RoHS Compliant		
UL File Number	• E70062		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow : 23°C, 2.00 mm	1.7	%	
Flow : 23°C, 2.00 mm	1.4	%	
Water Absorption			ISO 62
24 hr, 23°C	0.80	%	
Equilibrium, 23°C, 50% RH	1.9	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	3200	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	70.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	15	%	ISO 527-2
Flexural Modulus (23°C)	3200	MPa	ISO 178
Flexural Strength (23°C)	90.0	MPa	ISO 178
Poisson's Ratio	0.40		ISO 527-2

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.3	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	65	kJ/m <sup>2</sup>	ISO 179/1eU
Notched Izod Impact Strength (23°C)	4.1	kJ/m <sup>2</sup>	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature 1.8 MPa, Unannealed	75.0	°C	ISO 75-2/A
Melting Temperature	265	°C	ISO 11357-3
RTI Elec			UL 746
0.40 mm	130	°C	
0.75 mm	130	°C	
1.5 mm	130	°C	
3.0 mm	130	°C	
RTI Str			UL 746
0.40 mm	110	°C	
0.75 mm	110	°C	
1.5 mm	110	°C	
3.0 mm	110	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (0.750 mm)	1.0E+18	ohms-cm	IEC 60093
Dielectric Strength (1.00 mm)	17	kV/mm	IEC 60243
Comparative Tracking Index (3.00 mm)	250 to 399	V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746
0.200 mm	PLC 0		
0.40 mm	PLC 0		
0.75 mm	PLC 0		
1.5 mm	PLC 0		
3.0 mm	PLC 0		
Hot-wire Ignition (HWI)			UL 746
0.200 mm	PLC 0		
0.40 mm	PLC 0		
0.75 mm	PLC 0		
1.5 mm	PLC 0		
3.0 mm	PLC 0		

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.40 mm	V-0		
0.75 mm	V-0		
1.5 mm	V-0		
3.0 mm	V-0		
Glow Wire Flammability Index			IEC 60695-2-12
0.200 mm	960	°C	
0.40 mm	960	°C	
0.75 mm	960	°C	
1.5 mm	960	°C	
3.0 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.200 mm	960	°C	
0.40 mm	960	°C	
0.75 mm	960	°C	
1.5 mm	960	°C	
3.0 mm	960	°C	
Injection	Nominal Value	Unit	
Drying Temperature	80	°C	
Drying Time	4.0	hr	
Suggested Max Regrind	50	%	
Rear Temperature	260 to 290	°C	
Middle Temperature	260 to 290	°C	
Front Temperature	260 to 290	°C	
Nozzle Temperature	260 to 290	°C	
Processing (Melt) Temp	270 to 285	°C	
Mold Temperature	65 to 95	°C	

**Notes**

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

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