



Vydyne® FR350J NT0727

Ascend Performance Materials Operations LLC - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

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		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow : 73°F, 0.0787 in	1.7	%	
Flow : 73°F, 0.0787 in	1.4	%	
Water Absorption (24 hr, 73°F)	0.80	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.9	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	464000	psi	ISO 527-2
Tensile Stress (Break, 73°F)	10200	psi	ISO 527-2
Tensile Strain (Break, 73°F)	15	%	ISO 527-2
Flexural Modulus (73°F)	464000	psi	ISO 178
Flexural Strength (73°F)	13100	psi	ISO 178
Poisson's Ratio	0.40		ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.0	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	31	ft·lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	2.0	ft·lb/in ²	ISO 180

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	167	°F	ISO 75-2/A
Melting Temperature	509	°F	ISO 11357-3
RTI Elec			UL 746
0.016 in	266	°F	
0.030 in	266	°F	
0.06 in	266	°F	
0.12 in	266	°F	
RTI Str			UL 746
0.016 in	230	°F	
0.030 in	230	°F	
0.06 in	230	°F	
0.12 in	230	°F	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (0.0295 in)	1.0E+18	ohms·cm	IEC 60093
Dielectric Strength (0.0394 in)	430	V/mil	IEC 60243
Comparative Tracking Index (0.118 in)	250 to 399	V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746
0.0079 in	PLC 0		
0.016 in	PLC 0		
0.030 in	PLC 0		
0.06 in	PLC 0		
0.12 in	PLC 0		
Hot-wire Ignition (HWI)			UL 746
0.0079 in	PLC 0		
0.016 in	PLC 0		
0.030 in	PLC 0		
0.06 in	PLC 0		
0.12 in	PLC 0		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.016 in	V-0		
0.030 in	V-0		
0.06 in	V-0		
	5VA		
0.12 in	V-0		
	5VA		
Glow Wire Flammability Index			IEC 60695-2-12
0.0079 in	1760	°F	
0.016 in	1760	°F	
0.030 in	1760	°F	
0.06 in	1760	°F	
0.12 in	1760	°F	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.0079 in	1760	°F	
0.016 in	1760	°F	
0.030 in	1760	°F	
0.06 in	1760	°F	
0.12 in	1760	°F	

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176	°F
Drying Time	4.0	hr
Suggested Max Regrind	50	%
Rear Temperature	500 to 554	°F
Middle Temperature	500 to 554	°F
Front Temperature	500 to 554	°F
Nozzle Temperature	500 to 554	°F
Processing (Melt) Temp	518 to 545	°F
Mold Temperature	149 to 203	°F

Notes

¹ Typical properties: these are not to be construed as specifications.