

Vydyne® 909 BK

polyamide 66/6 copolymer



Vydyne 909 BK is an halogenated, 25% glass-filled, flame-retardant PA66/6 copolymer with excellent strength and toughness. It is lubricated for machine feed and easy mold release

and has an Underwriters Laboratories UL 94 flammability classification of V-0 at 0.4 mm (0.016") thick.

General				
Material Status	• Commercial: Active			
Availability	• Asia Pacific	• Europe	• North America	
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight			
Additive	• Flame Retardant	• Halogen	• Lubricant	
Features	• Crack Resistant	• Good Toughness	• High Strength	
	• Flame Retardant	• Halogenated	• Ignition Resistant	
	• Good Mold Release	• High Rigidity	• Lubricated	
Uses	• Appliances	• Electrical Parts		
	• Automotive Electronics	• Electrical/Electronic Applications	• Living Hinges	
	• Bobbins	• Housings	• Printed Circuit Boards	
	• Connectors	• Industrial Applications	• Switches	
	• Electrical Housing	• Lighting Applications		
RoHS Compliance	• RoHS Compliant			
Automotive Specifications	• DELPHI M-6538V	• GM GMP.PA66.058		
UL File Number	• E70062			
Appearance	• Black			
Forms	• Pellets			
Processing Method	• Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.47	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.0	--	%	
Flow : 23°C, 2.00 mm	0.40	--	%	
Water Absorption				ISO 62
24 hr, 23°C	0.70	--	%	
Equilibrium, 23°C, 50% RH	1.3	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9100	7100	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	132	90.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.2	3.0	%	ISO 527-2
Flexural Modulus (23°C)	8300	5000	MPa	ISO 178
Flexural Strength (23°C)	193	140	MPa	ISO 178
Poisson's Ratio	0.40	--		ISO 527-2

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	9.5	--	kJ/m ²	
23°C	9.4	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	35	--	kJ/m ²	
23°C	40	--	kJ/m ²	
Notched Izod Impact Strength (23°C)	9.0	--	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	250	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	230	--	°C	ISO 75-2/A
Melting Temperature	250	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	2.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.0E-4	--	cm/cm/°C	
RTI Elec				UL 746
0.40 mm	65.0	--	°C	
0.75 mm	130	--	°C	
1.5 mm	130	--	°C	
3.0 mm	130	--	°C	
RTI Imp				UL 746
0.40 mm	65.0	--	°C	
0.75 mm	65.0	--	°C	
1.5 mm	95.0	--	°C	
3.0 mm	95.0	--	°C	
RTI Str				UL 746
0.40 mm	65.0	--	°C	
0.75 mm	110	--	°C	
1.5 mm	110	--	°C	
3.0 mm	110	--	°C	

Electrical	Dry	Conditioned	Unit	Test Method
Arc Resistance (3.00 mm)	PLC 6	--		ASTM D495
Comparative Tracking Index (3.00 mm)	250 to 399	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.75 mm	PLC 0	--		
1.5 mm	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)				UL 746
3.00 mm	PLC 3	--		
Hot-wire Ignition (HWI)				UL 746
0.75 mm	PLC 0	--		
1.5 mm	PLC 0	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.40 mm	V-0	--		
0.75 mm	V-0	--		
1.5 mm	• V-0 • 5VA	--		
3.0 mm	• V-0 • 5VA	--		
Glow Wire Flammability Index				IEC 60695-2-12
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
0.40 mm	930	--	°C	
0.75 mm	750	--	°C	
1.5 mm	750	--	°C	
3.0 mm	800	--	°C	
Oxygen Index	32	--	%	ISO 4589-2

Injection	Dry Unit
Drying Temperature	80 °C
Drying Time	4.0 hr
Suggested Max Regrind	25 %
Rear Temperature	240 to 270 °C
Middle Temperature	240 to 270 °C
Front Temperature	240 to 270 °C
Nozzle Temperature	240 to 270 °C
Processing (Melt) Temp	250 to 270 °C
Mold Temperature	65 to 95 °C

Notes

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

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