

Starflam® 909 BK

copolyamide 66/6

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

General

Regional Availability	• North America	• Europe	• Asia Pacific
Additive	• Flame Retarding Agent	• Lubricant	
Features	• Crack Resistant • Good Toughness • High Strength	• Flame Retardant • Halogenated • Ignition Resistant	• Good Mold Release • High Rigidity • Lubricated
UL File Number	• E70062		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	dry	cond.	Unit	Test Standard
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	0.4	*	%	
Water Absorption				ISO 62
23°C, 24 hr	0.7	*	%	
Equilibrium, 23°C, 50% RH	1.3	*	%	

Mechanical

	dry	cond.	Unit	Test Standard
Tensile Modulus (23°C)	9100	7100	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	132	90	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.2	3	%	ISO 527-2
Flexural Modulus (23°C)	8300	5000	MPa	ISO 178
Flexural Strength (23°C)	193	140	MPa	ISO 178
Poisson's Ratio (23°C)	0.4	-	-	ISO 527-2

Impact

	dry	cond.	Unit	Test Standard
Charpy Notched Impact Strength				ISO 179/1eA
+23°C	9.4	-	kJ/m ²	
-30°C	9.5	-	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
+23°C	40	-	kJ/m ²	
-30°C	35	-	kJ/m ²	

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Notched Izod Impact Strength, +23°C	9	-	kJ/m²	ISO 180/1A
Thermal	dry	cond.	Unit	Test Standard
Heat Deflection Temperature				ISO 75-2/A
1.80 MPa, Unannealed	230	-	°C	
0.45 MPa, Unannealed	250	-	°C	
Melting Temperature	250	*	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	20	*	E-6/K	
Transverse : 23 to 55°C, 2.00 mm	100	*	E-6/K	
RTI Elec				UL 746
0.750 mm	130		°C	
1.50 mm	130		°C	
3.00 mm	130		°C	
RTI Imp				UL 746
0.750 mm	65		°C	
1.50mm	95		°C	
3.00 mm	95		°C	
RTI Str				UL 746
0.750 mm	110		°C	
1.50 mm	110		°C	
3.00 mm	110		°C	
Electrical	Value			Test Standard
Arc Resistance (3.00 mm)	6			ASTM D 495
High Amp Arc Ignition (HAI)				UL 746
0.750 mm	PLC 0			
1.50 mm	PLC 0			
High Voltage Arc Tracking Rate (HVTR), 3.00 mm	PLC 3			UL 746
Hot-wire Ignition (HWI)				UL 746
0.750 mm	PLC 0			
1.50 mm	PLC 0			
Flammability	Value		Unit	Test Standard
Flammability				UL 94
0.400 mm	V-0		-	
0.750 mm	V-0		-	
1.50 mm	V-0		-	
3.00 mm	V-0		-	

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Flammability, 5V			UL 94
1.50 mm	5VA	-	
3.00 mm	5VA	-	
Glow Wire Flammability Index			IEC 60695-2-12
0.400 mm	960	°C	
0.750 mm	960	°C	
1.50 mm	960	°C	
3.00 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.400 mm	930	°C	
0.750 mm	750	°C	
1.50 mm	750	°C	
3.00 mm	800	°C	
Injection			
	Value	Unit	
Drying Temperature	80	°C	
Drying Time	4	h	
Rear Temperature	240 - 270	°C	
Middle Temperature	240 - 270	°C	
Front Temperature	240 - 270	°C	
Nozzle temperature	240 - 270	°C	
Processing (Melt) Temperature	250 - 270	°C	
Mold Temperature	65 - 95	°C	

