

Starflam® 909 BK

Ascend Performance Materials Operations LLC - Polyamide 66/6 Copolymer

General Information

Product Description

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

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight		
Additive	• Flame Retardant	• Lubricant	
Features	• Crack Resistant	• Good Toughness	• High Strength
	• Flame Retardant	• Halogenated	• Ignition Resistant
	• Good Mold Release	• High Rigidity	• Lubricated
Automotive Specifications	• TESLA TM-1006 V3 303120V		
UL File Number	• E70062		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID	• PA66/6-GF25 FR		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.47	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 73°F, 0.0787 in	1.0	--	%	
Flow : 73°F, 0.0787 in	0.40	--	%	
Water Absorption (24 hr, 73°F)	0.70	--	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	1.3	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.32E+6	1.03E+6	psi	ISO 527-1
Tensile Stress (Break, 73°F)	19100	13100	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.2	3.0	%	ISO 527-2
Flexural Modulus (73°F)	1.20E+6	725000	psi	ISO 178
Flexural Stress (73°F)	28000	20300	psi	ISO 178
Poisson's Ratio (73°F)	0.40	--		ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F	4.5	--	ft·lb/in ²	
73°F	4.5	--	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F	17	--	ft·lb/in ²	
73°F	19	--	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	4.3	--	ft·lb/in ²	ISO 180/1A
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	482	--	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	446	--	°F	ISO 75-2/A
Melting Temperature	482	--	°F	ISO 11357-3
CLTE - Flow (73 to 131°F, 0.0787 in)	1.1E-5	--	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F, 0.0787 in)	5.6E-5	--	in/in/°F	ISO 11359-2
RTI Elec				UL 746B



0.030 in	266	--	°F	
0.06 in	266	--	°F	
0.12 in	266	--	°F	
RTI Imp				UL 746B
0.030 in	149	--	°F	
0.06 in	203	--	°F	
0.12 in	203	--	°F	
RTI Str				UL 746B
0.030 in	230	--	°F	
0.06 in	230	--	°F	
0.12 in	230	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Arc Resistance (0.118 in)	PLC 6	--		ASTM D495
High Amp Arc Ignition (HAI)				UL 746A
0.030 in	PLC 0	--		
0.06 in	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR) (0.118 in)	PLC 3	--		UL 746A
Hot-wire Ignition (HWI)				UL 746A
0.030 in	PLC 0	--		
0.06 in	PLC 0	--		
Flammability	Dry	Conditioned	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
0.016 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
0.016 in	1710	--	°F	
0.030 in	1380	--	°F	
0.06 in	1380	--	°F	
0.12 in	1470	--	°F	
Processing Information				
Injection			Dry Unit	
Drying Temperature			176 °F	
Drying Time			4.0 hr	
Rear Temperature			464 to 518 °F	
Middle Temperature			464 to 518 °F	
Front Temperature			464 to 518 °F	
Nozzle Temperature			464 to 518 °F	
Processing (Melt) Temp			482 to 518 °F	
Mold Temperature			149 to 203 °F	

