

Vydyne® ECO366 BK13

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

Vydyne ECO366 BK13 is a non-halogenated, unfilled, flame-retardant PA66 homopolymer designed with superior flow properties to assist in filling thin-walled, intricate parts. 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 Information				
UL YellowCard		E70062-101463748		
Additive		Flame Retardant		
		Lubricant		
Features		Ductile		
		Flame Retardant		
		Good Crack Resistance		
		Good Mold Release		
		Good Toughness		
		Halogen Free		
		Low Density		
		Lubricated		
Uses		Appliances		
		Automotive Electronics		
		Bobbins		
		Connectors		
		Electrical Housing		
		Electrical Parts		
		Electrical/Electronic Applications		
		Fasteners		
		Industrial Applications		
		Lighting Applications		
		Living Hinges		
		Printed Circuit Boards		
UL File Number		E70062		
Appearance		Black		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method

Density	1.17	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	0.60	--	%	
Flow : 23°C, 2.00 mm	0.90	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	
Equilibrium, 23°C, 50% RH	2.3	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Stress (Yield, 23°C)	83.0	58.0	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	4.0	5.0	%	ISO 527-2
Flexural Modulus (23°C)	3900	1350	MPa	ISO 178
Flexural Strength (23°C)	107	39.0	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	3.7	--	kJ/m ²	
23°C	3.4	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	78	--	kJ/m ²	
23°C	75	--	kJ/m ²	
Notched Izod Impact Strength (23°C)	6.0	--	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	240	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	75.0	--	°C	ISO 75-2/A
Melting Temperature	265	--	°C	ISO 11357-3
RTI Elec				UL 746
0.400 mm	120	--	°C	
0.750 mm	120	--	°C	
1.50 mm	120	--	°C	
3.00 mm	120	--	°C	
RTI Imp				UL 746
0.400 mm	75.0	--	°C	
0.750 mm	80.0	--	°C	
1.50 mm	80.0	--	°C	
3.00 mm	80.0	--	°C	
RTI Str				UL 746
0.400 mm	105	--	°C	

0.750 mm	110	--	°C	
1.50 mm	110	--	°C	
3.00 mm	110	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity (0.750 mm)	1.0E+10	--	ohms·cm	IEC 60093
Dielectric Strength (1.00 mm)	17	--	kV/mm	IEC 60243
Arc Resistance (3.00 mm)	PLC 5	--		ASTM D495
Comparative Tracking Index (3.00 mm)	600	--	V	IEC 60112
High Amp Arc Ignition (HAI)				UL 746
0.400 mm	PLC 2	--		
0.750 mm	PLC 1	--		
1.50 mm	PLC 1	--		
3.00 mm	PLC 1	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 0	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.400 mm	PLC 4	--		
0.750 mm	PLC 4	--		
1.50 mm	PLC 3	--		
3.00 mm	PLC 2	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.400 mm	V-0	--		
0.750 mm	V-0	--		
1.50 mm	V-0	--		
3.00 mm	V-0	--		
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	960	--	°C	
0.750 mm	960	--	°C	
1.50 mm	700	--	°C	
3.00 mm	700	--	°C	
Injection	Dry	Unit		
Drying Temperature	80.0		°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	65.0 to 95.0	°C

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