Vydyne® ECO366

Polyamide 66

Ascend Performance Materials Operations LLC

Message:

Vydyne ECO366 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 Switches
UL File Number	E70062
Appearance	Natural Color
Forms	Pellets
Processing Method	Injection Molding

Physical	Dry	Conditioned	Unit	Test Method

Density	1.17	--	g/cm³	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/m²	
23°C	3.4	--	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	78	--	kJ/m²	
23°C	75	--	kJ/m²	
Notched Izod Impact Strength (23°C)	6.0	--	kJ/m²	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

Recommended distributors for this material

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