Vydyne® ECO315 BK06

Polyamide 66/6 Copolymer

Ascend Performance Materials Operations LLC

Message:

Vydyne ECO315 BK06 is a non-halogenated, unfilled, flame-retardant PA66/6 copolymer with excellent toughness and ductility. 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	
Additive	Flame Retardant
	Lubricant
Features	Ductile
	Flame Retardant
	Good Crack Resistance
	Good Mold Release
	Good Toughness
	Halogen Free
	High Elongation
	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	Black
Forms	Pellets
Processing Method	Injection Molding

Physical	Dry	Conditioned	Unit	Test Method

Density	1.16	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow : 23°C, 2.00 mm	1.4	--	%	
Flow : 23°C, 2.00 mm	1.2	--	%	
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	
Equilibrium, 23°C, 50% RH	2.3	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus (23°C)	5000	3500	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	75.0	52.0	MPa	ISO 527-2
Tensile Strain				ISO 527-2
Yield, 23°C	5.5	20	%	
Break, 23°C	25	30	%	
Flexural Modulus (23°C)	3200	1560	MPa	ISO 178
Flexural Strength (23°C)	92.0	45.0	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	5.4	--	kJ/m²	
23°C	5.4	--	kJ/m²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	--		
23°C	No Break	--		
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	225	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	65.0	--	°C	ISO 75-2/A
Melting Temperature	244	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C, 2.00 mm	1.1E-4	--	cm/cm/°C	
Transverse : 23 to 55°C, 2.00 mm	1.1E-4	--	cm/cm/°C	
RTI Elec				UL 746
0.400 mm	130	--	°C	
0.750 mm	130	--	°C	
1.50 mm	130	--	°C	
3.00 mm	130	--	°C	

RTI Imp				UL 746
0.400 mm	65.0	--	°C	
0.750 mm	65.0	--	°C	
1.50 mm	85.0	--	°C	
3.00 mm	85.0	--	°C	
RTI Str				UL 746
0.400 mm	100	--	°C	
0.750 mm	100	--	°C	
1.50 mm	100	--	°C	
3.00 mm	110	--	°C	
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume Resistivity (0.750 mm)	1.0E+11	--	ohms·cm	IEC 60093
Dielectric Strength (1.00 mm)	13	--	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 0	--		
0.750 mm	PLC 0	--		
1.50 mm	PLC 0	--		
3.00 mm	PLC 0	--		
High Voltage Arc Tracking Rate (HVTR)	PLC 1	--		UL 746
Hot-wire Ignition (HWI)				UL 746
0.400 mm	PLC 4	--		
0.750 mm	PLC 4	--		
1.50 mm	PLC 4	--		
3.00 mm	PLC 3	--		
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	875	--	°C	
0.750 mm	875	--	°C	
1.50 mm	775	--	°C	
3.00 mm	725	--	°C	
Oxygen Index	29	--	%	ISO 4589-2

Injection	Dry	Unit	
Drying Temperature	80.0		°C
Drying Time	4.0		hr
Suggested Max Regrind	50		%
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	65.0 to 95.0		°C

Recommended distributors for this material

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