

Vydyne® ECO315J BK0707

Polyamide 66/6 Copolymer

Ascend Performance Materials Operations LLC

Message:

Vydyne ECO315J BK0707 is a non-halogenated, unfilled, flame-retardant PA66/6 copolymer with excellent toughness and ductility. It is stabilized to provide heat stability up to 125°C for 1,000 hours in a dry environment. ECO315J BK0707 is also 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	E70062-249073
Additive	Lubricant
	Flame retardancy
Features	Low density
	Good cracking resistance
	Good toughness
	Lubrication
	Good demoulding performance
	Halogen-free
	Extended tensile rate
	ductility
	Flame retardancy
Uses	Lighting Applications
	Electrical/Electronic Applications
	Electrical components
	Electrical housing
	Electrical appliances
	Industrial application
	Active hinge
	Fasteners
	Switch
	Connector
	Automotive Electronics
	spool
	Printed circuit board
UL File Number	E70062
Appearance	Black
Forms	Particle
Processing Method	Injection molding

Physical	Dry	Conditioned	Unit	Test Method
Density	1.16	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Lateral flow: 23°C, 2.00mm	1.4	--	%	ISO 294-4
Traffic: 23°C, 2.00mm	1.2	--	%	ISO 294-4
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.3	--	%	ISO 62
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	%	ISO 527-2
Fracture, 23°C	25	30	%	ISO 527-2
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/m ²	ISO 179/1eA
23°C	5.4	--	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	--		ISO 179/1eU
23°C	No Break	--		ISO 179/1eU
Notched Izod Impact (23°C)	6.0	--	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	225	--	°C	ISO 75-2/B
1.8 MPa, not annealed	65.0	--	°C	ISO 75-2/A
Melting Temperature	244	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 55°C, 2.00mm	1.1E-4	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 55°C, 2.00mm	1.1E-4	--	cm/cm/°C	ISO 11359-2
RTI Elec				UL 746
0.40 mm	130	--	°C	UL 746
0.75 mm	130	--	°C	UL 746

1.5 mm	130	--	°C	UL 746
3.0 mm	130	--	°C	UL 746
RTI Imp				UL 746
0.40 mm	65.0	--	°C	UL 746
0.75 mm	65.0	--	°C	UL 746
1.5 mm	85.0	--	°C	UL 746
3.0 mm	85.0	--	°C	UL 746
RTI				UL 746
0.40 mm	100	--	°C	UL 746
0.75 mm	100	--	°C	UL 746
1.5 mm	100	--	°C	UL 746
3.0 mm	110	--	°C	UL 746
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
0.40 mm	PLC 0	--		UL 746
0.75 mm	PLC 0	--		UL 746
1.5 mm	PLC 0	--		UL 746
3.0 mm	PLC 0	--		UL 746
High Voltage Arc Tracking Rate (HVTR)				UL 746
PLC 1	--			UL 746
Hot-wire Ignition (HWI)				UL 746
0.40 mm	PLC 4	--		UL 746
0.75 mm	PLC 4	--		UL 746
1.5 mm	PLC 4	--		UL 746
3.0 mm	PLC 3	--		UL 746
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.40 mm	V-0	--		UL 94
0.75 mm	V-0	--		UL 94
1.5 mm	V-0	--		UL 94
3.0 mm	V-0	--		UL 94
Glow Wire Flammability Index				IEC 60695-2-12
0.40 mm	960	--	°C	IEC 60695-2-12
0.75 mm	960	--	°C	IEC 60695-2-12
1.5 mm	960	--	°C	IEC 60695-2-12

3.0 mm	960	--	°C	IEC 60695-2-12
Glow Wire Ignition Temperature				IEC 60695-2-13
0.40 mm	875	--	°C	IEC 60695-2-13
0.75 mm	875	--	°C	IEC 60695-2-13
1.5 mm	775	--	°C	IEC 60695-2-13
3.0 mm	725	--	°C	IEC 60695-2-13
Oxygen Index	29	--	%	ISO 4589-2
Injection	Dry	Unit		
Drying Temperature	80		°C	
Drying Time	4.0		hr	
Suggested Max Regrind	50		%	
Rear Temperature	240 - 270		°C	
Middle Temperature	240 - 270		°C	
Front Temperature	240 - 270		°C	
Nozzle Temperature	240 - 270		°C	
Processing (Melt) Temp	250 - 270		°C	
Mold Temperature	65 - 95		°C	

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