

## Ascend Performance Materials Vydyne® ECO315 BK06 Nylon 66/6, Flame Retardant, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 6/66 , Nylon 66/6, Unreinforced

### Material Notes:

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 Underwriters Laboratories UL 94 flammability classification of V-0 at 0.4 mm (0.016") thick. Availability: Asia Pacific Europe North America 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 Appearance: Black Forms: Pellets Processing Method: Injection Molding Information provided by Ascend Performance Materials.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Ascend-Performance-Materials-Vydyne-ECO315-BK06-Nylon-666-Flame-Retardant-DAM.php](http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-ECO315-BK06-Nylon-666-Flame-Retardant-DAM.php)

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.80 % @Time 86400 sec	0.80 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	2.3 %	2.3 %	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.012 cm/cm @Diameter 2.00 mm	0.012 in/in @Diameter 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.014 cm/cm @Diameter 2.00 mm	0.014 in/in @Diameter 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	5.50 MPa	798 psi	ISO 527-2
Tensile Strength, Yield	75.0 MPa	10900 psi	ISO 527-2
Tensile Modulus	5.00 GPa	725 ksi	ISO 527-2
Flexural Strength	92.0 MPa	13300 psi	ISO 178
Flexural Modulus	3.20 GPa	464 ksi	ISO 178
Poissons Ratio	0.40	0.40	ISO 527-2
Izod Impact, Notched (ISO)	6.00 kJ/m <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	ISO 180
	NB	NB	

Charpy Impact Unnotched Mechanical Properties	Metric @Temperature -30.0 °C	English @Temperature -22.0 °F	ISO 179/1eU Comments
	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.540 J/cm <sup>2</sup>	2.57 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.540 J/cm <sup>2</sup>	2.57 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	11.0 µm/m-°C	6.11 µin/in-°F	ISO 11359-2
	@Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	@Thickness 0.0787 in, Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	11.0 µm/m-°C	6.11 µin/in-°F	ISO 11359-2
	@Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	@Thickness 0.0787 in, Temperature 73.4 - 131 °F	
Melting Point	244 °C	471 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	225 °C	437 °F	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	65.0 °C	149 °F	Unannealed; ISO 75-2/A
UL RTI, Electrical	130 °C	266 °F	UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	130 °C	266 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 °C	266 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 °C	266 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	65.0 °C	149 °F	UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	65.0 °C	149 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	

Thermal Properties	85.0 °C Metric	185 °F English	Comments
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	85.0 °C	185 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	100 °C	212 °F	UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	100 °C	212 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	100 °C	212 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	110 °C	230 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-0	V-0	
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	V-0	V-0	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	29 %	29 %	ISO 4589-2
Glow Wire Test	725 °C	1340 °F	Ignition Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	775 °C	1430 °F	Ignition Temperature; IEC 60695-2-13
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	875 °C	1610 °F	Ignition Temperature; IEC 60695-2-13
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	875 °C	1610 °F	Ignition Temperature; IEC 60695-2-13
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	960 °C	1760 °F	Flammability Index; IEC 60695-2-12
	@Thickness 0.400 mm	@Thickness 0.0157 in	

Thermal Properties	Metric	English	Comments
	@Thickness 0.750 mm	@Thickness 0.0295 in	Flammability Index; IEC 60695-2-12
	960 °C	1760 °F	Flammability Index; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	960 °C	1760 °F	Flammability Index; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	IEC 60093
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Dielectric Strength	13.0 kV/mm	330 kV/in	IEC 60243
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Arc Resistance	120 - 179 sec	120 - 179 sec	ASTM D495
	@Thickness 3.00 mm	@Thickness 0.118 in	
Comparative Tracking Index	600 V	600 V	IEC 60112
	@Thickness 3.00 mm	@Thickness 0.118 in	
Hot Wire Ignition, HWI	7.0 - 14 sec	7.0 - 14 sec	UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	7.0 - 14 sec	7.0 - 14 sec	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	7.0 - 14 sec	7.0 - 14 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	15 - 29 sec	15 - 29 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	UL 746

Electrical Properties	@Thickness 3.00 mm Metric	@Thickness 0.118 in English	Comments
High Voltage Arc-Tracking Rate, HVTR	10.1 - 25.4 mm/min	0.398 - 1.00 in/min	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	240 - 270 °C	464 - 518 °F	
Middle Barrel Temperature	240 - 270 °C	464 - 518 °F	
Front Barrel Temperature	240 - 270 °C	464 - 518 °F	
Nozzle Temperature	240 - 270 °C	464 - 518 °F	
Melt Temperature	250 - 270 °C	482 - 518 °F	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China