

## Ascend Performance Materials Vydyn<sup>®</sup> 909 Nylon 66/6, 25% Glass Reinforced, Ignition Resistant, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 6/66 , Nylon 66/6 , 30% Glass Fiber Reinforced

### Material Notes:

Vydyn<sup>®</sup> 909 is halogenated, 25% glass-filled, flame-retardant PA66/6 copolymer with excellent strength and toughness. 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. Availability: Asia Pacific Europe North America Additive: Halogen Lubricant Features: Good Crack Resistance Good Mold Release Good Toughness Halogenated High Rigidity High Strength Ignition Resistance 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: Natural Color Forms: Pellets Processing Method: Injection Molding Information provided by Ascend

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Ascend-Performance-Materials-Vydyn-909-Nylon-666-25-Glass-Reinforced-Ignition-Resistant-DAM.php](http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyn-909-Nylon-666-25-Glass-Reinforced-Ignition-Resistant-DAM.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.47 g/cc	1.47 g/cc	ISO 1183
Water Absorption	0.70 %	0.70 %	24 hrs; ISO 62
Moisture Absorption at Equilibrium	1.5 %	1.5 %	50%rh; ISO 62
Linear Mold Shrinkage	0.0040 cm/cm @Thickness 2.00 mm	0.0040 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.010 cm/cm @Thickness 2.00 mm	0.010 in/in @Thickness 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	132 MPa	19100 psi	ISO 527-2
Elongation at Break	2.2 %	2.2 %	ISO 527-2
Tensile Modulus	9.10 GPa	1320 ksi	ISO 527-2
Flexural Strength	193 MPa	28000 psi	ISO 178
Flexural Modulus	9.30 GPa	1350 ksi	ISO 178
Poissons Ratio	0.37	0.37	ISO 527-2
Izod Impact, Notched (ISO)	9.00 kJ/m <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	ISO 180
Charpy Impact Unnotched	3.50 J/cm <sup>2</sup>	16.7 ft-lb/in <sup>2</sup>	ISO 179/1eU

Mechanical Properties	@Temperature -30.0 °C Metric	@Temperature -22.0 °F English	Comments
	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.940 J/cm <sup>2</sup>	4.47 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.950 J/cm <sup>2</sup>	4.52 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	2.00 µm/m-°C	1.11 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	10.0 µm/m-°C	5.56 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	250 °C	482 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	250 °C	482 °F	ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	230 °C	446 °F	ISO 75-2/A
UL RTI, Electrical	65.0 °C	149 °F	UL 746B
	@Thickness 4.00 mm	@Thickness 0.157 in	
	130 °C	266 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 °C	266 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
	130 °C	266 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
UL RTI, Mechanical with Impact	65.0 °C	149 °F	UL 746B
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	65.0 °C	149 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	95.0 °C	203 °F	

Thermal Properties	Metric @Thickness 1.50 mm	English @Thickness 0.0591 in	UL 746B Comments
	95.0 °C	203 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	65.0 °C	149 °F	UL 746B
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	110 °C	230 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	110 °C	230 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
	110 °C	230 °F	UL 746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Flammability, UL94	V-0	V-0	
	@Thickness 0.400 - 3.00 mm	@Thickness 0.0157 - 0.118 in	
	5VA	5VA	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	32 %	32 %	ASTM D2863
Glow Wire Test	750 °C	1380 °F	Ignition Temp; IEC 60695-2-12
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	750 °C	1380 °F	Ignition Temp; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	800 °C	1470 °F	Ignition Temp; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	930 °C	1710 °F	Ignition Temp; IEC 60695-2-12
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	960 °C	1760 °F	Flammability Index; IEC 60695-2-12
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	960 °C	1760 °F	Flammability Index; IEC 60695-2-12
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	960 °C	1760 °F	Flammability Index; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Thermal Properties	860 °C Metric	1750 °F English	Comments Flammability Index: IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 119 sec @Thickness 3.00 mm	60 - 119 sec @Thickness 0.118 in	ASTM D496
Comparative Tracking Index	250 - 399 V @Thickness 3.00 mm	250 - 399 V @Thickness 0.118 in	IEC 60112
Hot Wire Ignition, HWI	>= 120 sec @Thickness 0.750 mm	>= 120 sec @Thickness 0.0295 in	UL 746A
	>= 120 sec @Thickness 1.50 mm	>= 120 sec @Thickness 0.0591 in	UL 746B
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 0.750 mm	>= 120 arcs @Thickness 0.0295 in	UL 746A
	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	UL 746B
High Voltage Arc-Tracking Rate, HVTR	80.1 - 150 mm/min @Thickness 3.00 mm	3.15 - 5.91 in/min @Thickness 0.118 in	UL 746A

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	
Mold Temperature	65.0 - 95.0 °C	149 - 203 °F	
Drying Temperature	80.0 °C	176 °F	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Suggest Max Regrind	25%	

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