

Ascend Performance Materials Vydyn® 66B, 66J Nylon 66, Dry as Molded

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

Material Notes:

Vydyn® 66B and 66J are members of a family of unreinforced extrusion grade Nylon 66 resins. They are available in natural color. These resins offer high strength, rigidity, and toughness for a broad range of demanding application requirements. Vydyn extrusion grade resins provide good resistance to a wide variety of chemicals, solvents, gasoline, and machine and motor oils. Vydyn 66B Series resins are of high-molecular-weight grade developed to provide high and controlled melt strength. Vydyn 66J Resins are heat-stabilized version for added resistance to elevated temperature use. The high viscosity of Vydyn 66J allows for a very stable and easily controlled melt extrudate. Vydyn 66B and 66J are recognized by Underwriters Laboratories.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyn-66B-66J-Nylon-66-Dry-as-Molded.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	ISO 1183
Water Absorption	1.2 % @Time 86400 sec	1.2 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	2.5 %	2.5 %	50% RH; ISO 62
Linear Mold Shrinkage	0.013 cm/cm @Thickness 2.00 mm	0.013 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.015 cm/cm @Thickness 2.00 mm	0.015 in/in @Thickness 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	82.0 MPa	11900 psi	ISO 527
Elongation at Break	175 %	175 %	ISO 527
Elongation at Yield	10 %	10 %	ISO 527
Tensile Modulus	3.00 GPa	435 ksi	ISO 527
Flexural Strength	34.0 MPa	4930 psi	ISO 178
Flexural Modulus	2.90 GPa	421 ksi	ISO 178
Poissons Ratio	0.42	0.42	ISO 527
Shear Modulus	1.06 GPa	154 ksi	Calculated
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	ISO 180

Mechanical Properties	NB Metric	NB English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.780 J/cm²	3.71 ft-lb/in²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.900 J/cm²	4.28 ft-lb/in²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 µm/m-°C	5.56 µin/in-°F	
	@Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	@Thickness 0.0787 in, Temperature 73.4 - 131 °F	ISO 11359
CTE, linear, Transverse to Flow	10.0 µm/m-°C	5.56 µin/in-°F	
	@Thickness 2.00 mm, Temperature 23.0 - 55.0 °C	@Thickness 0.0787 in, Temperature 73.4 - 131 °F	ISO 11359
Melting Point	260 °C	500 °F	ISO 3146
Deflection Temperature at 0.46 MPa (66 psi)	195 °C	383 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	66.0 °C	151 °F	ISO 75
Vicat Softening Point	237 °C	459 °F	ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
UL RTI, Electrical	130 °C	266 °F	UL 746B
	@Thickness 0.710 mm	@Thickness 0.0280 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	
UL RTI, Mechanical with Impact	75.0 °C	167 °F	UL 746B
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	75.0 °C	167 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Thermal Properties	Metric	English	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746B
UL RTI, Mechanical without Impact	85.0 °C	185 °F	UL 746B
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	85.0 °C	185 °F	UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	85.0 °C	185 °F	UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	28 %	28 %	ASTM D2863
Glow Wire Test	700 °C	1290 °F	Ignition Temperature; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	700 °C	1290 °F	Ignition Temperature; IEC 60695-2-12
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	700 °C	1290 °F	Ignition Temperature; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	850 °C	1560 °F	Flammability Index; IEC 60695-2-12
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	850 °C	1560 °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	5.00e+15 ohm-cm	5.00e+15 ohm-cm	IEC 60093
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties Dielectric Strength	Metric 14.0 kV/mm	English 356 kV/in	Comments IEC 60243
	@Thickness 3.00 mm	@Thickness 0.118 in	
Arc Resistance	120 - 180 sec	120 - 180 sec	UL 746A
	@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 - 15 sec	7.0 - 15 sec	UL 746A
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	15 - 30 sec	15 - 30 sec	UL 746A
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	30 - 60 sec	30 - 60 sec	UL 746A
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	>= 120 arcs	>= 120 arcs	UL 746A
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	UL 746A
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min	0.000 - 0.394 in/min	UL 746A
	@Thickness 3.00 mm	@Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Processing Temperature	250 - 295 °C	482 - 563 °F	
Die Temperature	270 - 295 °C	518 - 563 °F	
Melt Temperature	270 - 295 °C	518 - 563 °F	
Back Pressure	3.00 - 17.0 MPa	435 - 2470 psi	

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