Ascend Performance Materials Vydyne® 47H BK0644 Nylon 66, Impact Modified, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Impact Grade

Material Notes:

Vydyne® 47H BK0644 is a high-performance, medium-impact-modified, heat-stabilized PA66 resin with excellent UV stability and outstanding processing characteristics. This product has an UL746C f1 rating, making it suitable for a variety of outdoor applications. Availability:Asia PacificEuropeNorth AmericaAdditive:Impact Modifier Features:Gasoline ResistanceGeneral Purpose Good Abrasion ResistanceGood Chemical Resistance Good ProcessabilityGood ToughnessHigh Impact ResistanceImpact ModifiedLow Temperature Impact Resistance Low Temperature ToughnessOil ResistantSolvent ResistantUses: Automotive ApplicationsConnectorsConsumer ApplicationsElectrical/Electronic ApplicationsFastenersGearsIndustrial Applications Appearance: BlackForms: PelletsProcessing Method: Injection MoldingInformation provided by Ascend Performance Materials.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-47H-BK0644-Nylon-66-Impact-Modified-DAM.php

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in³	ISO 1183
Water Absorption	1.2 % @Time 86400 sec	1.2 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	2.3 %	2.3 %	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.018 cm/cm @Diameter 2.00 mm	0.018 in/in @Diameter 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.016 cm/cm @Diameter 2.00 mm	0.016 in/in @Diameter 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	52.0 MPa	7540 psi	ISO 527-2
Tensile Strength, Yield	60.0 MPa	8700 psi	ISO 527-2
Elongation at Break	>= 22 %	>= 22 %	ISO 527-2
Tensile Modulus	2.78 GPa	403 ksi	ISO 527-2
Flexural Strength	70.0 MPa	10200 psi	ISO 178
Flexural Modulus	2.30 GPa	334 ksi	ISO 178
Izod Impact, Notched (ISO)	12.0 kJ/m² @Temperature -40.0 °C	5.71 ft-lb/in² @Temperature -40.0 °F	ISO 180

Mechanical Properties	Metric	English	Comments
	16.0 kJ/m²	7.61 ft-lb/in²	ISO 180
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	18.0 kJ/m²	8.57 ft-lb/in²	ISO 180
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.10 J/cm²	5.23 ft-lb/in²	ISO 179/1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	1.70 J/cm²	8.09 ft-lb/in²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.90 J/cm²	9.04 ft-lb/in²	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	14.0 µm/m-°C	7.78 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	260 °C	500 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	185 °C	365 °F	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	63.0 °C	145 °F	Unannealed; ISO 75-2/A
UL RTI, Electrical	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	

Thermal Properties	Metric	English	Comments
UL RTI, Mechanical with Impact	@Thickness 0.750 mm	@Thickness 0.0295 in	UL 746
	75.0 °C @Thickness 1.50 mm	167 °F @Thickness 0.0591 in	UL 746
	75.0 °C @Thickness 3.00 mm	167 °F @Thickness 0.118 in	UL 746
UL RTI, Mechanical without Impact	115 °C @Thickness 0.750 mm	239 °F @Thickness 0.0295 in	UL 746
	115 °C @Thickness 1.50 mm	239 °F @Thickness 0.0591 in	UL 746
	115 °C @Thickness 3.00 mm	239 °F @Thickness 0.118 in	UL 746
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	
Glow Wire Test	700 °C @Thickness 0.750 mm	1290 °F @Thickness 0.0295 in	Flammability Index; IEC 60695-2-12
	700 °C @Thickness 3.00 mm	1290 °F @Thickness 0.118 in	Flammability Index; IEC 60695-2-12
	725 °C @Thickness 0.750 mm	1340 °F @Thickness 0.0295 in	Ignition Temperature; IEC 60695-2-13
	725 °C @Thickness 3.00 mm	1340 °F @Thickness 0.118 in	Ignition Temperature; IEC 60695-2-13
	775 °C @Thickness 1.50 mm	1430 °F @Thickness 0.0591 in	Flammability Index; IEC 60695-2-12
	800 °C @Thickness 1.50 mm	1470 °F @Thickness 0.0591 in	Ignition Temperature; IEC 60695-2-13

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm @Thickness 0.750 mm	1.00e+11 ohm-cm @Thickness 0.0295 in	IEC 60093
Dielectric Strength	12.0 kV/mm @Thickness 1.00 mm	305 kV/in @Thickness 0.0394 in	IEC 60243
Arc Resistance	60 - 119 sec	60 - 119 sec	ASTM D495
Comparative Tracking Index	525 V @Thickness 3.00 mm	525 V @Thickness 0.118 in	IEC 60112
Hot Wire Ignition, HWI	7.0 - 14 sec @Thickness 0.750 mm	7.0 - 14 sec @Thickness 0.0295 in	UL 746
	7.0 - 14 sec @Thickness 1.50 mm	7.0 - 14 sec @Thickness 0.0591 in	UL 746
	15 - 29 sec @Thickness 3.00 mm	15 - 29 sec @Thickness 0.118 in	UL 746
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 0.750 mm	>= 120 arcs @Thickness 0.0295 in	UL 746
	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	UL 746
	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	UL 746
High Voltage Arc-Tracking Rate, HVTR	25.5 - 80.0 mm/min	1.00 - 3.15 in/min	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	280 - 310 °C	536 - 590 °F	
Middle Barrel Temperature	280 - 310 °C	536 - 590 °F	
Front Barrel Temperature	280 - 310 °C	536 - 590 °F	
Nozzle Temperature	280 - 310 °C	536 - 590 °F	
Melt Temperature	285 - 305 °C	545 - 581 °F	
Mold Temperature	65.0 - 95.0 °C	149 - 203 °F	
Drying Temperature	80.0 °C	176 °F	

Processing Properties	Metric	English	Comments

Descriptive Properties	Value	Comments
Suggested Max Regrind	25 %	

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