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

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

Material Notes:

Vydyne® 47H is general-purpose, impact-modified PA66 resin. Available in natural, it is heat-stabilized for improved resistance to elevated temperatures. The heat stabilization package for Vydyne 47H was formulated to provide thermal endurance when used in applications in which continuous or extended high-temperature exposure is anticipated. Vydyne 47H is recognized for all the processing and property advantages inherent to PA66 with the addition of improved impact strength. This resin offers a well balanced combination of engineering properties characterized by high melt point, good surface lubricity, abrasion resistance and resistance to many chemicals, machine and motor oils, solvents and gasoline. Vydyne 47H is designed to meet the critical low-temperature impact requirements called out in many automotive specifications.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: Natural ColorForms: 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-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

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched (ISO)	kJ/m²	ft-lb/in²	ISO 180
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	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
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.10 J/cm²	5.23 ft-lb/in²	ISO 179
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	1.70 J/cm²	8.09 ft-lb/in²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.90 J/cm²	9.04 ft-lb/in²	ISO 179
	@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

Thermal Properties	Metric	English	Comments
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 °C @Thickness 3.00 mm	266 °F @Thickness 0.118 in	UL 746
UL RTI, Mechanical with Impact	75.0 °C @Thickness 0.750 mm	167 °F @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

Thermal Properties	Metric	English	Comments
	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	

Processing Properties	Metric	English	Comments
Mold Temperature	85.0 - 95.0 °C	185 - 203 °F	
Drying Temperature	80.0 °C	176 °F	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Suggested Max Regrind	25 %	

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