

Ascend Performance Materials Vydyn[®] R515 Nylon 66, 15% Glass Reinforced, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 20% Glass Fiber Filled

Material Notes:

Vydyn[®] R515 is general-purpose, 15% glass-fiber reinforced PA66 resin. Availability:Asia PacificEuropeNorth

AmericaFiller/Reinforcement:Glass Fiber, 15% Filler by WeightAdditive:Lubricant Features: Gasoline ResistanceGood Chemical

ResistanceGood FlowGood Mold ReleaseGrease ResistantHeat StabilizedHigh RigidityHigh StrengthLubricatedOil ResistantSolvent

ResistantUses:Automotive Under the HoodGearsHousingsPower/Other ToolsAppearance: 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-Vydyn-R515-Nylon-66-15-Glass-Reinforced-DAM.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Water Absorption	1.0 % @Time 86400 sec	1.0 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	2.2 %	2.2 %	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm @Diameter 2.00 mm	0.0050 in/in @Diameter 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.010 cm/cm @Diameter 2.00 mm	0.010 in/in @Diameter 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	120 MPa	17400 psi	ISO 527-2
Elongation at Break	3.0 %	3.0 %	ISO 527-2
Tensile Modulus	6.60 GPa	957 ksi	ISO 527-2
Flexural Strength	170 MPa	24700 psi	ISO 178
Flexural Modulus	5.90 GPa	856 ksi	ISO 178
Poissons Ratio	0.40	0.40	ISO 527-2
Izod Impact, Notched (ISO)	5.70 kJ/m ² @Temperature -30.0 °C	2.71 ft-lb/in ² @Temperature -22.0 °F	ISO 180
	6.60 kJ/m ² @Temperature 23.0 °C	3.14 ft-lb/in ² @Temperature 73.4 °F	ISO 180

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
	3.90 J/cm ²	18.6 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179
	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179
	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	3.00 µm/m-°C	1.67 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	ISO 11359-2
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	ISO 11359-2
Melting Point	260 °C	500 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	258 °C	496 °F	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	241 °C	466 °F	Unannealed; ISO 75-2/A
UL RTI, Electrical	120 °C	248 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	UL 746
	120 °C	248 °F	UL 746
UL RTI, Mechanical with Impact	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 746
	120 °C	248 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746
	85.0 °C	185 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	UL 746
	85.0 °C	185 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 746
	105 °C	221 °F	UL 746
			UL 746

Thermal Properties	@Thickness 3.00 mm Metric	@Thickness 0.118 in English	Comments
UL RTI, Mechanical without Impact	115 °C	239 °F	UL 746
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	120 °C	248 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Dielectric Strength	24.0 kV/mm	610 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 0.750 mm	@Thickness 0.0295 in	
	7.0 - 14 sec	7.0 - 14 sec	
	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 746
	7.0 - 14 sec	7.0 - 14 sec	
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746
	>= 120 arcs	>= 120 arcs	
High Amp Arc Ignition, HAI	@Thickness 0.750 mm	@Thickness 0.0295 in	UL 746

Electrical Properties	>= 120 arcs Metric	>= 120 arcs English	Comments
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
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	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	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Suggested Max Regrind	25 %	

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