

Ascend Performance Materials Vydyn[®] 22HSP Nylon 66, General Purpose, Heat Stabilized, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 66

Material Notes:

Availability:Asia PacificEuropeNorth America Additive:Lubricant Features: Fast Molding CycleGasoline ResistanceGeneral PurposeGood Abrasion ResistanceGood Chemical ResistanceGood Mold ReleaseGood ToughnessHigh RigidityHigh StrengthLubricatedOil ResistantSolvent ResistantUses:BearingsBushingsCamsConnectorsHousingsIndustrial ApplicationsAppearance: Natural ColorForms: PelletsProcessing Method: Injection MoldingInformation provided by Ascend

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyn-22HSP-Nylon-66-General-Purpose-Heat-Stabilized-DAM.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	ISO 1183
Water Absorption	1.2 %	1.2 %	24 hrs; ISO 62
Moisture Absorption at Equilibrium	2.4 %	2.4 %	Equilibrium at 50%rh; ISO 62
Linear Mold Shrinkage	0.022 cm/cm @Thickness 2.00 mm	0.022 in/in @Thickness 0.0787 in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.020 cm/cm @Thickness 2.00 mm	0.020 in/in @Thickness 0.0787 in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	ISO 527-2
Tensile Strength, Yield	85.0 MPa	12300 psi	ISO 527-2
Elongation at Break	25 %	25 %	ISO 527-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-2
Tensile Modulus	3.10 GPa	450 ksi	ISO 527-2
Flexural Strength	95.0 MPa	13800 psi	ISO 178
Flexural Modulus	2.90 GPa	421 ksi	ISO 178
Poissons Ratio	0.40	0.40	ISO 527-2
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	ISO 180
	5.00 kJ/m ² @Temperature -30.0 °C	2.38 ft-lb/in ² @Temperature -22.0 °F	ISO 180

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	@Temperature -30.0 °C	@Temperature -22.0 °F	ISO 179/1eU
	NB	NB	ISO 179/1eU
Charpy Impact, Notched	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.500 J/cm ²	2.38 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179/1eA
	@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 11359-2
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 11359-2
Melting Point	260 °C	500 °F	ISO 11357-2
Deflection Temperature at 0.46 MPa (66 psi)	200 °C	392 °F	ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	70.0 °C	158 °F	ISO 75-2/A
UL RTI, Electrical	140 °C	284 °F	UL 746
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	140 °C	284 °F	UL 746
UL RTI, Mechanical with Impact	@Thickness 1.50 mm	@Thickness 0.0591 in	
	140 °C	284 °F	UL 746
	@Thickness 76.2 mm	@Thickness 3.00 in	
UL RTI, Mechanical with Impact	95.0 °C	203 °F	UL 746
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	100 °C	212 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	110 °C	230 °F	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 0.710 mm	@Thickness 0.0280 in	
	120 °C	248 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
	125 °C	257 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	V-2	V-2	
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	V-2	V-2	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-2	V-2	
	@Thickness 3.00 mm	@Thickness 0.118 in	
	Oxygen Index	24 %	
Glow Wire Test	700 °C	1290 °F	Ignition Temp; IEC 60695-2-12
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	700 °C	1290 °F	Ignition Temp; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	700 °C	1290 °F	Ignition Temp; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	825 °C	1520 °F	Flammability Index; IEC 60695-2-12
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	825 °C	1520 °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
Arc Resistance	60 - 119 sec	60 - 119 sec	ASTM D495
	@Thickness 3.00 mm	@Thickness 0.118 in	
Comparative Tracking Index	400 - 599 V	400 - 599 V	IEC 60112

Electrical Properties	@Thickness 3.00 mm Metric	@Thickness 0.118 in English	Comments
Hot Wire Ignition, HWI	7.0 - 14 sec	7.0 - 14 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	7.0 - 14 sec	7.0 - 14 sec	
High Amp Arc Ignition, HAI	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746
	7.0 - 15 sec	7.0 - 15 sec	
	@Thickness 0.710 mm	@Thickness 0.0280 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	>= 120 arcs	>= 120 arcs	
High Amp Arc Ignition, HAI	@Thickness 1.50 mm	@Thickness 0.0591 in	UL 746
	>= 120 arcs	>= 120 arcs	
	@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 746
	>= 120 arcs	>= 120 arcs	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Processing Temperature	285 - 300 °C	545 - 572 °F	Melt
Rear Barrel Temperature	260 - 280 °C	500 - 536 °F	
Middle Barrel Temperature	270 - 285 °C	518 - 545 °F	
Front Barrel Temperature	280 - 290 °C	536 - 554 °F	
Nozzle Temperature	280 - 300 °C	536 - 572 °F	
Mold Temperature	65.0 - 95.0 °C	149 - 203 °F	
Drying Temperature	<= 70.0 °C	<= 158 °F	
Dry Time	1.00 - 3.00 hour	1.00 - 3.00 hour	

Descriptive Properties	Value	Comments
Suggested Max Regrind	50%	

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