

Ascend Performance Materials Vydyne® 20NSP BLK Nylon 66, DAM

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Nucleated

Material Notes:

Vydyne® 20NSP BLK is a general-purpose, high nucleated, lubricated PA66 resin. Available in black, it is designed to crystallize rapidly in order to reduce cycle times and increase productivity through faster part set-up. The higher crystalline structure will increase tensile modulus and strength, reduce elongation and may slightly lower mold shrinkage when compared to standard general-purpose non nucleated PA66. The rapid crystallization of Vydyne 20NSP BLK resin may allow part ejection at a higher temperature compared to general-purpose PA66. Critical factors unique to each application such as mold design, part design, tolerances and other factors will dictate ultimate cycle time benefits. It is recommended to check critical part dimensions against specifications before adopting shorter molding cycles. Vydyne 20NSP BLK resin has an external lubricant for improved machine feed and an internal lubricant for improved mold release.

Typical Applications/End Uses: End uses for Vydyne 20NSP BLK include terminal blocks, bears, control cams, electrical connectors, housings, cable ties, fasteners, switch components and industrial parts that require chemical resistance, stiffness, wear resistance and rigidity.

Availability: Asia Pacific Europe North America Additive: Lubricant Nucleating Agent Features: Fast Molding Cycle General Purpose Good Mold Release Good Stiffness High Rigidity Lubricated Nucleated Uses: Bearings Cams Connectors Fasteners General Purpose Housings Industrial Applications Appearance: Black Forms: Pellets Processing Method: Injection Molding Information provided by Ascend Performance Materials.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-Vydyne-20NSP-BLK-Nylon-66-DAM.php

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	ISO 1183
Water Absorption	1.2 % @Time 86400 sec	1.2 % @Time 24.0 hour	ISO 62
Moisture Absorption at Equilibrium	2.4 %	2.4 %	50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.014 cm/cm @Diameter 2.00 mm	0.014 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	75.0 MPa	10900 psi	ISO 527-2
Tensile Strength, Yield	95.0 MPa	13800 psi	ISO 527-2
Elongation at Break	13 %	13 %	ISO 527-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-2

Tensile Modulus Mechanical Properties	3.80 GPa Metric	551 ksi English	ISO 527-2 Comments
Flexural Strength	100 MPa	14500 psi	ISO 178
Flexural Modulus	3.20 GPa	464 ksi	ISO 178
Poissons Ratio	0.40	0.40	ISO 527-2
Izod Impact, Notched (ISO)	5.00 kJ/m ² @Temperature -30.0 °C	2.38 ft-lb/in ² @Temperature -22.0 °F	ISO 180
	6.00 kJ/m ² @Temperature 23.0 °C	2.86 ft-lb/in ² @Temperature 73.4 °F	ISO 180
Charpy Impact Unnotched	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.500 J/cm ² @Temperature -30.0 °C	2.38 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	0.600 J/cm ² @Temperature 23.0 °C	2.86 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 µm/m-°C	5.56 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	10.0 µm/m-°C	5.56 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)	230 °C	446 °F	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	Unannealed; ISO 75-2/A
UL RTI, Electrical	130 °C	266 °F	UL 746
	@Thickness 4.00 mm	@Thickness 0.157 in	
	130 °C	266 °F	UL 746

Thermal Properties	@Thickness 0.710 mm Metric	@Thickness 0.0280 in English	Comments
	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	
UL RTI, Mechanical with Impact	75.0 °C	167 °F	UL 746
	@Thickness 4.00 mm	@Thickness 0.157 in	
	75.0 °C	167 °F	UL 746
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	75.0 °C	167 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	75.0 °C	167 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	75.0 °C	167 °F	UL 746
	@Thickness 4.00 mm	@Thickness 0.157 in	
	85.0 °C	185 °F	UL 746
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	85.0 °C	185 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	85.0 °C	185 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-2	V-2	
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	V-2	V-2	
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	V-2	V-2	
	@Thickness 4.50 mm	@Thickness 0.177 in	
	V-2	V-2	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	26 %	26 %	ISO 4589-2
	700 °C	1290 °F	Ignition Temperature; IEC 60695-2-

Thermal Properties	Metric	English	Comments
	700 °C @Thickness 0.710 mm	1290 °F @Thickness 0.0280 in	
	700 °C @Thickness 1.50 mm	1290 °F @Thickness 0.0591 in	Ignition Temperature; IEC 60695-2-13
	700 °C @Thickness 3.00 mm	1290 °F @Thickness 0.118 in	Ignition Temperature; IEC 60695-2-13
	800 °C @Thickness 0.710 mm	1470 °F @Thickness 0.0280 in	Flammability Index; IEC 60695-2-12
	800 °C @Thickness 1.50 mm	1470 °F @Thickness 0.0591 in	Flammability Index; IEC 60695-2-12
	930 °C @Thickness 3.00 mm	1710 °F @Thickness 0.118 in	Flammability Index; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+10 ohm-cm @Thickness 0.750 mm	1.00e+10 ohm-cm @Thickness 0.0295 in	IEC 60093
Dielectric Strength	26.0 kV/mm @Thickness 1.00 mm	660 kV/in @Thickness 0.0394 in	IEC 60243
Arc Resistance	120 - 179 sec @Thickness 3.00 mm	120 - 179 sec @Thickness 0.118 in	ASTM D495
Comparative Tracking Index	600 V @Thickness 3.00 mm	600 V @Thickness 0.118 in	IEC 60112
Hot Wire Ignition, HWI	7.0 - 14 sec @Thickness 0.710 mm	7.0 - 14 sec @Thickness 0.0280 in	UL 746
	15 - 29 sec @Thickness 1.50 mm	15 - 29 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 0.710 mm	>= 120 arcs @Thickness 0.0280 in	UL 746
	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	UL 746

Electrical Properties	Metric ^{arcs}	English ^{arcs}	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min	0.000 - 0.394 in/min	UL 746

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

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China