

Ascend Performance Materials Vydyne® 47 BK11 Nylon 66, Impact Modified, DAM

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

Material Notes:

Vydyne® 47H BK11 is a general-purpose, impact-modified PA66 resin. Available in black, it is heat-stabilized for improved resistance to elevated temperatures. The heat stabilization package for Vydyne 47H BK11 was formulated to provide thermal endurance when used in applications in which continuous or extended high-temperature exposure is anticipated. Vydyne 47H BK11 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 BK11 is designed to meet the critical low-temperature impact requirements called out in many automotive specifications. Availability: Asia Pacific Europe North America Additive: Impact Modifier Features: Gasoline Resistance General Purpose Good Abrasion Resistance Good Chemical Resistance Good Processability Good Toughness High Impact Resistance Impact Modified Low Temperature Impact Resistance Low Temperature Toughness Oil Resistant Solvent Resistant Uses: Automotive Applications Connectors Consumer Applications Electrical/Electronic Applications Fasteners Gears 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-47-BK11-Nylon-66-Impact-Modified-DAM.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|----------------------------------|------------------------------------|----------------|
| Density | 1.10 g/cc | 0.0397 lb/in ³ | ISO 1183 |
| Water Absorption | 1.2 % @Time 86400 sec | 1.2 % @Time 24.0 hour | ISO 62 |
| Moisture Absorption at Equilibrium | 2.3 % | 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 Mechanical Properties | 70.0 MPa Metric | 10200 psi English | ISO 178 Comments |
|--|------------------------|----------------------------|---------------------|
| Flexural Modulus | 2.30 GPa | 334 ksi | ISO 178 |
| Izod Impact, Notched (ISO) | 12.0 kJ/m ² | 5.71 ft-lb/in ² | ISO 180 |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |
| | 16.0 kJ/m ² | 7.61 ft-lb/in ² | ISO 180 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 18.0 kJ/m ² | 8.57 ft-lb/in ² | 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/cm ² | 5.23 ft-lb/in ² | ISO 179/1eA |
| | @Temperature -40.0 °C | @Temperature -40.0 °F | |
| | 1.70 J/cm ² | 8.09 ft-lb/in ² | ISO 179/1eA |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 1.90 J/cm ² | 9.04 ft-lb/in ² | 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 |

| Thermal Properties | @Thickness 0.750 mm Metric | @Thickness 0.0295 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 0.750 mm | @Thickness 0.0295 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 | 115 °C | 239 °F | UL 746 |
| | @Thickness 0.750 mm | @Thickness 0.0295 in | |
| | 115 °C | 239 °F | UL 746 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| | 115 °C | 239 °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 | |
| Glow Wire Test | 700 °C | 1290 °F | Flammability Index; IEC 60695-2-12 |
| | @Thickness 0.750 mm | @Thickness 0.0295 in | |
| | 700 °C | 1290 °F | Flammability Index; IEC 60695-2-12 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |
| | 725 °C | 1340 °F | Ignition Temperature; IEC 60695-2-13 |
| | @Thickness 0.750 mm | @Thickness 0.0295 in | |
| | 725 °C | 1340 °F | Ignition Temperature; IEC 60695-2-13 |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |

| Thermal Properties | ^{775 °C} Metric | ^{1430 °F} English | Comments |
|--------------------|-----------------------------|-------------------------------|--------------------------------------|
| | @Thickness 1.50 mm | @Thickness 0.0591 in | Flammability Index, IEC 60695-2-12 |
| | 800 °C | 1470 °F | Ignition Temperature; IEC 60695-2-13 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |

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

| Processing Properties | Metric | English | Comments |
|-----------------------|----------------|--------------|----------|
| 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 % | |

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