

Product Texts

Vydyne 47H BK0501 is general-purpose, medium impact-modified, heat stabilized PA66 resin. The product offers improved resistance to thermal degradation.

47H BK0501 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.

| Processing/Physical Characteristics | dry / cond | Unit | Test Standard |
|--|-------------------|-------------|----------------------|
| ISO Data | | | |
| ^[C] Molding shrinkage, parallel | 1.8 / * | % | ISO 294-4, 2577 |
| ^[C] Molding shrinkage, normal | 1.6 / * | % | ISO 294-4, 2577 |

[C]: CAMPUS

| Mechanical properties | dry / cond | Unit | Test Standard |
|--|--------------------|-------------------|----------------------|
| ISO Data | | | |
| ^[C] Tensile Modulus | 2800 / 1700 | MPa | ISO 527 |
| Yield stress | 60 / 45 | MPa | ISO 527 |
| Stress at break | 52 / 40 | MPa | ISO 527 |
| Strain at break | 22 / 60 | % | ISO 527 |
| Flexural modulus, 23°C | 2300 / 780 | MPa | ISO 178 |
| Flexural strength | 70 / 24 | MPa | ISO 178 |
| ^[C] Charpy impact strength, +23°C | N / N | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy impact strength, -30°C | N / N | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy notched impact strength, +23°C | 16 / 62 | kJ/m ² | ISO 179/1eA |
| ^[C] Charpy notched impact strength, -30°C | 11 / 24 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength, +23°C | 18 / 44 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength | 16 / 24 | kJ/m ² | ISO 180/1A |
| Temperature | -30 | °C | - |

[C]: CAMPUS

| Thermal properties | dry / cond | Unit | Test Standard |
|--|-------------------|-------------|----------------------|
| ISO Data | | | |
| ^[C] Melting temperature, 10°C/min | 260 / * | °C | ISO 11357-1/-3 |
| ^[C] Temp. of deflection under load, 1.80 MPa | 63 / * | °C | ISO 75-1/-2 |
| ^[C] Temp. of deflection under load, 0.45 MPa | 185 / * | °C | ISO 75-1/-2 |
| ^[C] Coeff. of linear therm. expansion, parallel | 111 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Coeff. of linear therm. expansion, normal | 136 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Burning Behav. at 1.5 mm nom. thickn. | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 1.5 / * | mm | - |
| ^[C] Burning Behav. at thickness h | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 0.8 / * | mm | - |
| Glow Wire Flammability Index (GWFI) | 700 | °C | IEC 60695-2-12 |
| GWFI - thickness tested (1) | 0.75 | mm | - |
| Glow Wire Flammability Index (GWFI) | 775 | °C | IEC 60695-2-12 |
| GWFI - thickness tested (2) | 1.5 | mm | - |
| Glow Wire Flammability Index (GWFI) | 700 | °C | IEC 60695-2-12 |
| GWFI - thickness tested (3) | 3 | mm | - |
| Glow Wire Ignition Temperature (GWIT) | 725 | °C | IEC 60695-2-13 |
| GWIT - thickness tested (1) | 0.75 | mm | - |
| Glow Wire Ignition Temperature (GWIT) | 800 | °C | IEC 60695-2-13 |
| GWIT - thickness tested (2) | 1.5 | mm | - |
| Glow Wire Ignition Temperature (GWIT) | 725 | °C | IEC 60695-2-13 |
| GWIT - thickness tested (3) | 3 | mm | - |
| ASTM Data | | | |
| UL 94 Flame rating | HB | - | UL 94 |
| Thickness tested | 0.75 | mm | - |

[C]: CAMPUS

| Electrical properties | dry / cond | Unit | Test Standard |
|---|------------|-------|---------------|
| ISO Data | | | |
| ^[C] Volume resistivity | 1E9 / - | Ohm*m | IEC 62631-3-1 |
| ^[C] Electric strength | 12 / - | kV/mm | IEC 60243-1 |
| ^[C] Comparative tracking index | 525 / - | - | IEC 60112 |
| ASTM Data | | | |
| Arc Resistance | 90 / - | s | ASTM D 495 |

[C]: CAMPUS

| Other properties | dry / cond | Unit | Test Standard |
|------------------------------------|------------|-------------------|----------------|
| ^[C] Water absorption | 1.2 / * | % | Sim. to ISO 62 |
| ^[C] Humidity absorption | 2.3 / * | % | Sim. to ISO 62 |
| ^[C] Density | 1100 / - | kg/m ³ | ISO 1183 |

[C]: CAMPUS

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|-----------|------|---------------|
| Pre-drying - Temperature | 80 | °C | - |
| Pre-drying - Time | 4 | h | - |
| Melt temperature | 285 - 305 | °C | - |
| Mold temperature | 65 - 95 | °C | - |
| Zone 1 | 280 - 310 | °C | - |
| Zone 2 | 280 - 310 | °C | - |
| Zone 3 | 280 - 310 | °C | - |
| Nozzle temperature | 280 - 310 | °C | - |

Characteristics

Processing

Injection Molding

Delivery form

Pellets, Black

Additives

Lubricants

Special Characteristics

High impact or impact modified, Heat stabilized or stable to heat

Chemical Resistance

General Chemical Resistance, Solvent Resistance, Oil Resistance

Applications

Automotive, Electrical and Electronical, General Purpose

Regional Availability

North America, Europe, Asia Pacific