

Product Texts

Vydyne R515H BK02 is a general purpose, 15% glass-filled, heat-stabilized PA66 based resin designed for injection molding applications. R515H BK02 offers improved flow with a black surface finish and maintains the excellent resistance typical of PA66 in chemicals, machine and motor oils, solvents, and gasoline.

| Processing/Physical Characteristics | dry / cond | Unit | Test Standard |
|--|------------|------|-----------------|
| ISO Data | | | |
| ^[C] Molding shrinkage, parallel | 0.8 / * | % | ISO 294-4, 2577 |
| ^[C] Molding shrinkage, normal | 1.4 / * | % | ISO 294-4, 2577 |

[C]: CAMPUS

| Mechanical properties | dry / cond | Unit | Test Standard |
|--|-------------|-------------------|---------------|
| ISO Data | | | |
| ^[C] Tensile Modulus | 6600 / 4000 | MPa | ISO 527 |
| ^[C] Stress at break | 120 / 80 | MPa | ISO 527 |
| ^[C] Strain at break | 3 / 13 | % | ISO 527 |
| Flexural modulus, 23°C | 5900 / 3250 | MPa | ISO 178 |
| Flexural strength | 170 / 110 | MPa | ISO 178 |
| ^[C] Charpy impact strength, +23°C | 34 / 62 | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy impact strength, -30°C | 34 / 37 | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy notched impact strength, +23°C | 5.5 / 6.6 | kJ/m ² | ISO 179/1eA |
| ^[C] Charpy notched impact strength, -30°C | 5.4 / 5.4 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength, +23°C | 6.6 / 7 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength | 5.7 / 5.4 | 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 | 235 / * | °C | ISO 75-1/-2 |
| ^[C] Temp. of deflection under load, 0.45 MPa | 258 / * | °C | ISO 75-1/-2 |
| ^[C] Coeff. of linear therm. expansion, parallel | 38.3 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Coeff. of linear therm. expansion, normal | 80.2 / * | 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) | 675 | °C | IEC 60695-2-12 |
| GWFI - thickness tested (1) | 0.75 | mm | - |
| Glow Wire Flammability Index (GWFI) | 675 | °C | IEC 60695-2-12 |
| GWFI - thickness tested (2) | 1.5 | mm | - |
| Glow Wire Flammability Index (GWFI) | 675 | °C | IEC 60695-2-12 |
| GWFI - thickness tested (3) | 3 | mm | - |
| Glow Wire Ignition Temperature (GWIT) | 700 | °C | IEC 60695-2-13 |
| GWIT - thickness tested (1) | 0.75 | mm | - |
| Glow Wire Ignition Temperature (GWIT) | 700 | °C | IEC 60695-2-13 |
| GWIT - thickness tested (2) | 1.5 | mm | - |
| Glow Wire Ignition Temperature (GWIT) | 700 | °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 | | | |
| Volume resistivity | 1E11 / - | Ohm*m | IEC 62631-3-1 |
| ^[C] Electric strength | 29 / 27 | kV/mm | IEC 60243-1 |

| | | | |
|--------------------------------|----------------|---|-----------|
| [C] Comparative tracking index | 325 / - | - | IEC 60112 |
|--------------------------------|----------------|---|-----------|

ASTM Data

| | | | |
|----------------|---------------|---|------------|
| Arc Resistance | 90 / - | s | ASTM D 495 |
|----------------|---------------|---|------------|

[C]: CAMPUS

| Other properties | dry / cond | Unit | Test Standard |
|-------------------------|-----------------|-------------------|----------------|
| [C] Water absorption | 1.5 / * | % | Sim. to ISO 62 |
| [C] Humidity absorption | 2.2 / * | % | Sim. to ISO 62 |
| [C] Density | 1240 / - | 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, Release agent

Special Characteristics

Heat stabilized or stable to heat

Chemical Resistance

General Chemical Resistance, Solvent Resistance, Grease Resistance, Oil Resistance

Applications

Automotive, General Purpose

Regional Availability

North America, Europe, Asia Pacific