

Vydyne® R535H BK0932LT

 Ascend Performance Materials Operations LLC - *Polyamide 66*

General Information

Product Description

Vydyne R535H BK0932LT is a highly laser transparent, 35% glass-filled, heat-stabilized, medium viscosity PA66 based resin designed for injection molding applications. R535H BK0932LT offers standard flow with a black surface finish and maintains the excellent resistance typical of PA66 in chemicals, machine and motor oils, solvents, coolants and gasoline.

General

| | |
|------------------------|--|
| Material Status | • Commercial: Active |
| Availability | • Africa & Middle East • Europe • North America • Asia Pacific • Latin America |
| Filler / Reinforcement | • Glass Fiber, 35% Filler by Weight |
| Additive | • Heat Stabilizer • Lubricant • Mold Release |
| Features | • Chemical Resistant • Heat Stabilized • Solvent Resistant • Gasoline Resistant • Laser Weldable • Heat Aging Resistant • Lubricated |
| Appearance | • Black |
| Forms | • Pellets |
| Processing Method | • Injection Molding |
| Resin ID | • PA66-GF35 |

 Properties ¹

| Physical | Dry | Conditioned | Unit | Test Method |
|--|---------|-------------|-----------------------|-------------|
| Density | 1.41 | -- | g/cm ³ | ISO 1183 |
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow : 73°F, 0.0787 in | 0.80 | -- | % | |
| Flow : 73°F, 0.0787 in | 0.30 | -- | % | |
| Water Absorption (24 hr, 73°F) | 1.4 | -- | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 50% RH) | 1.9 | -- | % | ISO 62 |
| Mechanical | Dry | Conditioned | Unit | Test Method |
| Tensile Modulus (73°F) | 1.62E+6 | 1.13E+6 | psi | ISO 527-1 |
| Tensile Stress (Break, 73°F) | 29600 | 21000 | psi | ISO 527-2 |
| Tensile Strain (Break, 73°F) | 3.5 | 5.6 | % | ISO 527-2 |
| Flexural Modulus (73°F) | 1.58E+6 | 1.19E+6 | psi | ISO 178 |
| Flexural Stress (73°F) | 43400 | 28000 | psi | ISO 178 |
| Poisson's Ratio (73°F) | 0.40 | -- | | ISO 527-2 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -40°F | 5.2 | 7.1 | ft·lb/in ² | |
| -22°F | 5.7 | 7.1 | ft·lb/in ² | |
| 73°F | 6.7 | 11 | ft·lb/in ² | |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -40°F | 35 | 52 | ft·lb/in ² | |
| -22°F | 35 | 55 | ft·lb/in ² | |
| 73°F | 46 | 55 | ft·lb/in ² | |
| Notched Izod Impact Strength | | | | ISO 180/1A |
| -40°F | 5.2 | 6.7 | ft·lb/in ² | |
| -22°F | 5.7 | 6.7 | ft·lb/in ² | |
| 73°F | 6.2 | 9.0 | ft·lb/in ² | |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Deflection Temperature Under Load (66 psi, Unannealed) | 502 | 502 | °F | ISO 75-2/B |



| | | | | |
|---|------------|--------------------|-------------|--------------------|
| Deflection Temperature Under Load (264 psi, Unannealed) | 484 | 484 | °F | ISO 75-2/A |
| Melting Temperature | 500 | -- | °F | ISO 11357-3 |
| CLTE - Flow (73 to 131°F, 0.0787 in) | 1.1E-5 | -- | in/in/°F | ISO 11359-2 |
| CLTE - Transverse (73 to 131°F, 0.0787 in) | 6.1E-5 | -- | in/in/°F | ISO 11359-2 |
| RTI Elec | | | | UL 746B |
| 0.030 in | 284 | -- | °F | |
| 0.06 in | 284 | -- | °F | |
| 0.12 in | 284 | -- | °F | |
| RTI Imp | | | | UL 746B |
| 0.030 in | 257 | -- | °F | |
| 0.06 in | 257 | -- | °F | |
| 0.12 in | 257 | -- | °F | |
| RTI Str | | | | UL 746B |
| 0.030 in | 284 | -- | °F | |
| 0.06 in | 284 | -- | °F | |
| 0.12 in | 284 | -- | °F | |
| Electrical | Dry | Conditioned | Unit | Test Method |
| Volume Resistivity (0.0394 in) | 1.0E+13 | -- | ohms·cm | IEC 60093 |
| Electric Strength (0.0394 in) | 760 | 640 | V/mil | IEC 60243-1 |
| Arc Resistance (0.118 in) | PLC 6 | -- | | ASTM D495 |
| High Amp Arc Ignition (HAI) | | | | UL 746A |
| 0.030 in | PLC 0 | -- | | |
| 0.06 in | PLC 0 | -- | | |
| 0.12 in | PLC 0 | -- | | |
| Hot-wire Ignition (HWI) | | | | UL 746A |
| 0.030 in | PLC 4 | -- | | |
| 0.06 in | PLC 3 | -- | | |
| 0.12 in | PLC 4 | -- | | |
| Flammability | Dry | Conditioned | Unit | Test Method |
| Flame Rating | | | | UL 94 |
| 0.030 in | HB | -- | | |
| 0.06 in | HB | -- | | |
| 0.12 in | HB | -- | | |
| Glow Wire Flammability Index | | | | IEC 60695-2-12 |
| 0.030 in | 1290 | -- | °F | |
| 0.06 in | 1290 | -- | °F | |
| 0.12 in | 1610 | -- | °F | |
| Glow Wire Ignition Temperature | | | | IEC 60695-2-13 |
| 0.030 in | 1340 | -- | °F | |
| 0.06 in | 1340 | -- | °F | |
| 0.12 in | 1380 | -- | °F | |

Processing Information

| Injection | Dry Unit |
|------------------------|-----------------|
| Drying Temperature | 176 °F |
| Drying Time | 4.0 hr |
| Rear Temperature | 536 to 590 °F |
| Middle Temperature | 536 to 590 °F |
| Front Temperature | 536 to 590 °F |
| Nozzle Temperature | 536 to 590 °F |
| Processing (Melt) Temp | 545 to 581 °F |
| Mold Temperature | 149 to 203 °F |

