**JPHGABS**

High gloss resins impact resistance and heat resistance materials

**Typical Material Properties**

|  |  |  |
| --- | --- | --- |
| General |  |  |
| Material Status | Commercial: Active |  |
| Availability | North America |  |
| Forms | Pellets |  |
| Processing Method | Extrusion | Injection Molding |

|  |  |  |
| --- | --- | --- |
| Physical Properties | Nominal Values | Test Method |
| Specific Gravity | 1.04  | ASTM D792 |
| Molding Shrinkage - Flow  | 4.0E-3 to 7.0E-3 in/in | ASTM D955 |

|  |  |  |
| --- | --- | --- |
| Mechanical Properties |  |  |
| Tensile Modulus1 | 325000 psi | ASTM D638 |
| Tensile Strength1 |    | ASTM D638 |
| Yield | 6500 psi |   |
| Break | 4500 psi |   |
| Tensile Elongation1 (Break) | 40 % | ASTM D638 |
| Flexural Modulus2 | 370000 psi | ASTM D790 |
| Flexural Strength2 | 11000 psi | ASTM D790 |

|  |  |  |
| --- | --- | --- |
| Impact |  |  |
| Notched Izod Impact3 |    | ASTM D256 |
| 0°F, 0.125 in | 2.5 ft·lb/in |   |
| 73°F, 0.125 in | 6.0 ft·lb/in |   |
| Instrumented Dart Impact4 |    | ASTM D3763 |
| 0°F, 0.125 in, Peak Energy | 230 in·lb |   |
| 0°F, 0.125 in, Total Energy | 280 in·lb |   |
| 73°F, 0.125 in, Peak Energy | 300 in·lb |   |
| 73°F, 0.125 in, Total Energy | 490 in·lb |   |

|  |  |  |
| --- | --- | --- |
| Thermal |  |  |
| Deflection Temperature Under Load |    | ASTM D648 |
| 66 psi, Unannealed, 0.125 in | 198 °F |   |
| 264 psi, Unannealed, 0.125 in | 170 °F |   |
| Vicat Softening Temperature | 223 °F | ASTM D1525 |
| CLTE - Flow  | 4.4E-5 in/in/°F | ASTM D696 |

|  |  |  |
| --- | --- | --- |
| Flammability |  |  |
| Flame Rating (0.0580 in) | HB  | UL 94 |

|  |  |  |
| --- | --- | --- |
| Optical |  |  |
| Gardner Gloss (60°) | 90  | ASTM D523 |

|  |  |  |
| --- | --- | --- |
| Injection | Nominal Value |  |
| Drying Temperature | 180 to 190 °F |   |
| Drying Time | 2.0 to 4.0 hr |   |
| Suggested Max Moisture | 0.10 % |   |
| Processing (Melt) Temp | 425 to 525 °F |   |
| Mold Temperature | 80.0 to 140 °F |   |
| Back Pressure | 50.0 to 500 psi |   |
| Clamp Tonnage | 2.0 to 5.0 tons/in² |   |
| Screw L/D Ratio | 20.0:1.0  |   |
| Screw Compression Ratio | 1.5:1.0 to 3.5:1.0  |   |

|  |  |  |
| --- | --- | --- |
| Notes |  |  |
| 1Type I, 2.0 in/min |  |  |
| 2Type I, 0.050 in/min |  |  |

|  |  |  |
| --- | --- | --- |
| 310 mil Notch Depth |  |  |