

LEXANT™ RESIN 104R

REGION ASIA

DESCRIPTION

UL rated HB. 200 series recommended when V-2 rating required. 7.0 MFR, for thicker sections without sinks. Internal mold release. FDA food contact compliant in limited colors. Effective January 15th, 2007 this grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HP6.

TYPICAL PROPERTY VALUES

Revision 20180906

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|--------------------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 62 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 68 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 7 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 135 | % | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 97 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2340 | MPa | ASTM D 790 |
| Hardness, Rockwell M | 70 | - | ASTM D 785 |
| Hardness, Rockwell R | 118 | - | ASTM D 785 |
| Taber Abrasion, CS-17, 1 kg | 10 | mg/1000cy | ASTM D 1044 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 3204 | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 907 | J/m | ASTM D 256 |
| Tensile Impact, Type S | 630 | kJ/m ² | ASTM D 1822 |
| Falling Dart Impact (D 3029), 23°C | 169 | J | ASTM D 3029 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 154 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 6.4 mm, unannealed | 137 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 132 | °C | ASTM D 648 |
| CTE, -40°C to 95°C, flow | 6.84E-05 | 1/°C | ASTM E 831 |
| Specific Heat | 1.25 | J/g·°C | ASTM C 351 |
| Thermal Conductivity | 0.19 | W/m·°C | ASTM C 177 |
| Relative Temp Index, Elec | 130 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 130 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 130 | °C | UL 746B |
| PHYSICAL | | | |
| Specific Gravity | 1.2 | - | ASTM D 792 |
| Specific Volume | 0.83 | cm ³ /g | ASTM D 792 |
| Density | 1.19 | g/cm ³ | ASTM D 792 |
| Water Absorption, 24 hours | 0.15 | % | ASTM D 570 |
| Water Absorption, equilibrium, 23C | 0.35 | % | ASTM D 570 |
| Water Absorption, equilibrium, 100°C | 0.58 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf | 7 | g/10 min | ASTM D 1238 |

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|--|----------------|----------|--------------|
| OPTICAL | | | |
| Light Transmission, 2.54 mm | 88 | % | ASTM D 1003 |
| Haze, 2.54 mm | 1 | % | ASTM D 1003 |
| Refractive Index | 1.586 | - | ASTM D542 |
| ELECTRICAL | | | |
| Volume Resistivity | >1.E+17 | Ohm-cm | ASTM D 257 |
| Dielectric Strength, in air, 3.2 mm | 14.9 | kV/mm | ASTM D 149 |
| Relative Permittivity, 50/60 Hz | 3.17 | - | ASTM D 150 |
| Relative Permittivity, 1 MHz | 2.96 | - | ASTM D 150 |
| Dissipation Factor, 50/60 Hz | 0.0009 | - | ASTM D 150 |
| Dissipation Factor, 1 MHz | 0.01 | - | ASTM D 150 |
| Hot Wire Ignition {PLC} | 2 | PLC Code | UL 746A |
| High Voltage Arc Track Rate {PLC} | 2 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 1 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 2 | PLC Code | UL 746A |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94HB Flame Class Rating | 1.47 | mm | UL 94 |
| INJECTION MOLDING | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 3 – 4 | hrs | |
| Drying Time (Cumulative) | 48 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 310 – 330 | °C | |
| Nozzle Temperature | 305 – 325 | °C | |
| Front - Zone 3 Temperature | 310 – 330 | °C | |
| Middle - Zone 2 Temperature | 300 – 320 | °C | |
| Rear - Zone 1 Temperature | 290 – 310 | °C | |
| Mold Temperature | 80 – 115 | °C | |
| Back Pressure | 0.3 – 0.7 | MPa | |
| Screw Speed | 40 – 70 | rpm | |
| Shot to Cylinder Size | 40 – 60 | % | |
| Vent Depth | 0.025 – 0.076 | mm | |

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