



LEXANT™ FR RESINS BPL1000

REGION EUROPE

DESCRIPTION

LEXANT™ BPL1000 resin is a 25 MFR polycarbonate, MVR of 23. Non-chlorinated, non-brominated flame retardant, UL94 V0 rated. High flow with good impact performance. Suitable for thin wall applications. Available in opaque colors.

TYPICAL PROPERTY VALUES

Revision 20220623

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------|----------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 63 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 51 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 4.7 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 96.3 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 2670 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 102 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2660 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 64 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 53 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 4.7 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 96.8 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2460 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 94 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2360 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 600 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | N/A | J/m | ASTM D256 |
| Instrumented Dart Impact Total Energy, 23°C | 48 | J | ASTM D3763 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 111 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 105 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 7.E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 7.E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, flow | 7.E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 7.E-05 | 1/°C | ISO 11359-2 |
| Ball Pressure Test, 75°C +/- 2°C | PASS | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 112 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 114 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 96 | °C | ISO 75/Af |
| Relative Temp Index, Elec | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 80 | °C | UL 746B |
| PHYSICAL | | | |
| Specific Gravity | 1.16 | - | ASTM D792 |



| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|--------------------------|----------------|
| Mold Shrinkage on Tensile Bar, flow | 0.5 – 0.7 | % | SABIC method |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Mold Shrinkage, xflow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 300°C/ 1.2 kgf | 25.2 | g/10 min | ASTM D1238 |
| Density | 1.2 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/saturated) | 0.35 | % | ISO 62-1 |
| Moisture Absorption (23°C / 50% RH) | 0.15 | % | ISO 62 |
| Melt Volume Rate, MVR at 300°C/ 1.2 kg | 23 | cm ³ / 10 min | ISO 1133 |
| ELECTRICAL | | | |
| Dielectric Strength, in oil, 1.6 mm | 27 | kV/mm | ASTM D149 |
| Volume Resistivity | >1.E+15 | Ω.cm | IEC 60093 |
| Surface Resistivity, ROA | >1.E+15 | Ω | IEC 60093 |
| Relative Permittivity, 1 MHz | 2.9 | - | IEC 60250 |
| Dissipation Factor, 50/60 Hz | 0.03 | - | IEC 60250 |
| Dissipation Factor, 1 MHz | 0.01 | - | IEC 60250 |
| Comparative Tracking Index | 600 | V | IEC 60112 |
| Relative Permittivity, 50/60 Hz | 3 | - | IEC 60250 |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-2 Flame Class Rating | 0.45 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | 0.8 | mm | UL 94 |
| Glow Wire Flammability Index 960°C, passes at | 1 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 1.0 mm | 800 | °C | IEC 60695-2-13 |
| Oxygen Index (LOI) | 36 | % | ISO 4589 |
| INJECTION MOLDING | | | |
| Drying Temperature | 90 | °C | |
| Drying Time | 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 280 – 300 | °C | |
| Nozzle Temperature | 270 – 290 | °C | |
| Front - Zone 3 Temperature | 280 – 300 | °C | |
| Middle - Zone 2 Temperature | 270 – 290 | °C | |
| Rear - Zone 1 Temperature | 260 – 280 | °C | |
| Hopper Temperature | 60 – 80 | °C | |
| Mold Temperature | 90 | °C | |

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