



LEXANT™ FR RESINS LUX7169

REGION EUROPE

DESCRIPTION

LEXAN LUX7169 is an injection moldable polycarbonate (PC). It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0@0.9mm rating. It is designed for high light reflectance and shielding applications with good weathering capability.

TYPICAL PROPERTY VALUES

Revision 20200805

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|----------------|
| MECHANICAL | | | |
| Tensile Stress, yield, 50 mm/min | 55 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 50 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 5 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 75 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2750 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 90 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2700 | MPa | ISO 178 |
| Tensile Stress, yld, Type I, 50 mm/min | 55 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 50 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 5 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 75 | % | ASTM D638 |
| Tensile Modulus, 50 mm/min | 2750 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 90 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2700 | MPa | ASTM D790 |
| Hardness, Rockwell M | 46 | - | ISO 2039-2 |
| Hardness, Rockwell R | 120 | - | ISO 2039-2 |
| IMPACT | | | |
| Izod Impact, notched 80*10*3 +23°C | 35 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 25 | kJ/m ² | ISO 180/1A |
| Izod Impact, unnotched 80*10*3 +23°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, unnotched 80*10*3 -30°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, notched, 23°C | 400 | J/m | ASTM D256 |
| Izod Impact, unnotched, 23°C | NB | J/m | ASTM D4812 |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 40 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 142 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 143 | °C | ISO 306 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 135 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 120 | °C | ISO 75/Af |
| Ball Pressure Test, 125°C +/- 2°C | PASS | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 142 | °C | ASTM D1525 |
| Vicat Softening Temp, Rate B/120 | 143 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 135 | °C | ASTM D648 |



| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|--------------------------|----------------|
| HDT, 1.82 MPa, 3.2mm, unannealed | 120 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 6.8E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 6.8E-05 | 1/°C | ASTM E831 |
| CTE, 23°C to 80°C, flow | 7.2E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 80°C, xflow | 7.3E-05 | 1/°C | ISO 11359-2 |
| PHYSICAL | | | |
| Density | 1.38 | g/cm ³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 0.06 | % | ISO 62 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.03 | % | ASTM D570 |
| Melt Volume Rate, MVR at 300°C/ 1.2 kg | 19 | cm ³ / 10 min | ISO 1133 |
| Specific Gravity | 1.38 | - | ASTM D792 |
| Water Absorption, (23°C/24hrs) | 0.14 | % | ASTM D570 |
| Water Absorption, (23°C/saturated) | 0.22 | % | ISO 62-1 |
| Mold Shrinkage, flow | 0.3 – 0.5 | % | SABIC method |
| Mold Shrinkage, xflow | 0.3 – 0.5 | % | SABIC method |
| ELECTRICAL | | | |
| Comparative Tracking Index | 275 | V | IEC 60112 |
| Comparative Tracking Index (UL) {PLC} | 2 | PLC Code | UL 746A |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-2 Flame Class Rating | 0.4 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | 0.9 | mm | UL 94 |
| UL Recognized, 94-5VA Flame Class Rating | 3 | mm | UL 94 |
| Glow Wire Flammability Index 960°C, passes at | 1.0 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 1.0 mm | 875 | °C | IEC 60695-2-13 |
| INJECTION MOLDING | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 3 – 4 | Hrs | |
| Drying Time (Cumulative) | 48 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 270 – 295 | °C | |
| Nozzle Temperature | 265 – 290 | °C | |
| Front - Zone 3 Temperature | 270 – 295 | °C | |
| Middle - Zone 2 Temperature | 260 – 280 | °C | |
| Rear - Zone 1 Temperature | 250 – 270 | °C | |
| Mold Temperature | 70 – 95 | °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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