



LEXANT™ FR RESINS LUX7189

REGION EUROPE

DESCRIPTION

LEXAN LUX7189 is an injection moldable polycarbonate (PC) with an MVR (300°C/1.2kg) 23. It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0@1.5mm rating. It is designed for high light reflectance and shielding applications with good UV weathering capability.

TYPICAL PROPERTY VALUES

Revision 20240710

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|----------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 60 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 52 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 110 | % | ASTM D638 |
| Tensile Modulus, 50 mm/min | 2700 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 98 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2700 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 60 | 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 | 50 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2600 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 90 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2300 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 2140 | J/m | ASTM D4812 |
| Izod Impact, notched, 23°C | 150 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 100 | J/m | ASTM D256 |
| Instrumented Dart Impact Energy @ peak, 23°C | 59 | J | ASTM D3763 |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 35 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 11 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm | 160 | kJ/m ² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm | 160 | kJ/m ² | ISO 179/1eU |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 140 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 135 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 125 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 6.E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 6.5E-05 | 1/°C | ASTM E831 |
| Ball Pressure Test, 125°C +/- 2°C | PASSES | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 138 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 139 | °C | ISO 306 |
| HDT/Ae, 1.8 MPa Annealed 120°C, 2hrs | 133 | °C | ISO 75/Ae |
| PHYSICAL | | | |



| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------------------------|----------------|
| Specific Gravity | 1.3 | - | ASTM D792 |
| Density | 1.3 | g/cm ³ | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 300°C/ 1.2 kgf | 22 | g/10 min | ASTM D1238 |
| Melt Volume Rate, MVR at 300°C/ 1.2 kg | 23 | cm ³ /10 min | ISO 1133 |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-0 Flame Class Rating | 1.5 | mm | UL 94 |
| UL Recognized, 94-5VA Flame Class Rating | 3 | mm | UL 94 |
| UL Recognized, 94-5VB Flame Class Rating | 2.5 | mm | UL 94 |
| Glow Wire Flammability Index 960°C, passes at | 1 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 1.0 mm | 850 | °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 | |

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.