

LEXAN™ RESIN LUX2614G

REGION EUROPE

DESCRIPTION

Lexan LUX2614G (EXRL0944) is a diffusive, high viscosity, uv stabilized, flame retardant polycarbonate with improved light transmission and providing good colorstability under heat exposure. Developed for injection molding LED applications

TYPICAL PROPERTY VALUES

Revision 20180905

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------------------|----------------|
| MECHANICAL | | | |
| 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 |
| Tensile Stress, yield, 50 mm/min | 63 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 65 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 6 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 100 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2300 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 94 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2250 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | NB | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 650 | J/m | ASTM D 256 |
| Multiaxial Impact | 130 | J | ISO 6603 |
| 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 80*10*3 +23°C | 60 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 11 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 63 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 12 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| THERMAL | | | |
| CTE, -40°C to 95°C, flow | 6.84E-05 | 1/°C | ASTM E 831 |
| Specific Heat | 1.26 | J/g-°C | ASTM C 351 |
| Thermal Conductivity | 0.2 | W/m-°C | ASTM C177 |
| Ball Pressure Test, 125°C +/- 2°C | PASSES | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 143 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 144 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 123 | °C | ISO 75/Af |
| Relative Temp Index, Elec | 130 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 125 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 125 | °C | UL 746B |
| PHYSICAL | | | |

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|---|----------------|-------------------------|----------------|
| Water Absorption, equilibrium, 100°C | 0.58 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Density | 1.2 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 0.35 | % | ISO 62 |
| Moisture Absorption (23°C / 50% RH) | 0.13 | % | ISO 62 |
| Melt Volume Rate, MVR at 300°C/ 1.2 kg | 7 | cm ³ /10 min | ISO 1133 |
| OPTICAL | | | |
| Refractive Index | 1.586 | - | ISO 489 |
| ELECTRICAL | | | |
| Dielectric Strength, in air, 3.2 mm | 15 | 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} | 3 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 1 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 3 | PLC Code | UL 746A |
| Volume Resistivity | >1.E+15 | Ohm-cm | IEC 60093 |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-2 Flame Class Rating | 0.75 | mm | UL 94 |
| Glow Wire Flammability Index 750°C, passes at | 0.75 | mm | IEC 60695-2-12 |
| Glow Wire Flammability Index 850°C, passes at | 1.5 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 0.75 mm, by VDE | 875 | °C | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 1.5 mm | 850 | °C | IEC 60695-2-13 |
| UV-light, water exposure/immersion | F2 | - | UL 746C |
| INJECTION MOLDING | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 2 – 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 | 80 – 100 | °C | |

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