# LEXAN™ COPOLYMER EXL9111

REGION ASIA

## DESCRIPTION

LEXAN EXL9111 polycarbonate-Siloxane copolymer resin is a high flow, high impact,non-chlorinated, non-brominated flame retardant opaque injection molding (IM) grade.

## TYPICAL PROPERTY VALUES

Revision 20190802

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Hardness, Rockwell L | 92.2 | - | ASTM D 785 |
| Tensile Stress, yld, Type I, 50 mm/min | 60 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 54 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 4.6 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 76.4 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2387 | MPa | ASTM D 638 |
| Tensile Stress, yield | 60 | MPa | ISO 527 |
| Tensile Stress, break | 47 | MPa | ISO 527 |
| Tensile Strain, break | 46.7 | % | ISO 527 |
| Tensile Strain, yield | 4.5 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2347 | MPa | ISO 527 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 96.7 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2440 | MPa | ASTM D 790 |
| Flexural Stress, break, 2 mm/min | 93 | MPa | ISO 178 |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 95 | MPa | ASTM D 790 |
| Flexural Modulus, 2 mm/min | 2314 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 753 | J/m | ASTM D 256 |
| Izod Impact, notched, -30°C | 124 | J/m | ASTM D 256 |
| Izod Impact, unnotched, 23°C | NB | J/m | ASTM D 4812 |
| Instrumented Impact Total Energy, 23°C | 62.5 | J | ASTM D 3763 |
| Instrumented Impact Total Energy, -30°C | 62.3 | J | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C | 51.3 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 104 | kJ/m² | ISO 180/1A |
| Izod Impact, unnotched 80*10*4 +23°C | NB | kJ/m² | ISO 180/1U |
| Charpy Impact, notched, 23°C | 55.6 | kJ/m² | ISO 179/2C |
| Charpy Impact, notched, -30°C | 12.9 | kJ/m² | ISO 179/2C |
| Charpy Impact, unnotched, 23°C | NB | kJ/m² | ISO 179/2C |
| THERMAL | | | |
| HDT, 1.82 MPa, 3.2mm, unannealed | 101 | °C | ASTM D 648 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 111 | °C | ASTM D 648 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 103 | °C | ISO 75/Af |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 112 | °C | ISO 75/Bf |
| Vicat Softening Temp, Rate B/50 | 126 | °C | ASTM D 1525 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Vicat Softening Temp, Rate B/50 | 117 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 119 | °C | ISO 306 |
| CTE, -40°C to 40°C, flow | 64.8 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 65.6 | 1/°C | ASTM E 831 |
| Relative Temp Index, Elec [1] | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/impact [1] | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact [1] | 80 | °C | UL 746B |
| PHYSICAL | | | |
| Specific Gravity | 1.19 | - | ASTM D 792 |
| Density | 1.18 | g/cm³ | ASTM D 792 |
| Mold Shrinkage, flow, 24 hrs | 0.6 | % | ASTM D 955 |
| Mold Shrinkage, xflow, 24 hrs | 0.62 | % | ASTM D 955 |
| Melt Flow Rate, 300°C/1.2 kgf | 20 | g/10 min | ASTM D 1238 |
| Moisture Absorption (23°C / 50% RH) | 0.43 | % | ISO 62 |
| ELECTRICAL | | | |
| Volume Resistivity | >1E+16 | Ohm-cm | ASTM D 257 |
| Surface Resistivity | >1E+16 | Ohm | ASTM D 257 |
| Dielectric Constant, 1.1 GHz | 2.83 | - | SABIC method |
| Dissipation Factor, 1.1 GHz | 0.0061 | - | SABIC method |
| FLAME CHARACTERISTICS [1] | | | |
| UL Yellow Card Link | E207780-103826700 | - | - |
| UL Recognized, 94V-0 Flame Class Rating | ≥1.2 | mm | UL 94 |
| UL Recognized, 94V-1 Flame Class Rating | ≥0.8 | mm | UL 94 |
| INJECTION MOLDING | | | |
| Drying Temperature | 100 | °C | |
| Drying Time | 3 – 4 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 280 – 305 | °C | |
| Nozzle Temperature | 275 – 300 | °C | |
| Front - Zone 3 Temperature | 280 – 305 | °C | |
| Middle - Zone 2 Temperature | 275 – 295 | °C | |
| Rear - Zone 1 Temperature | 260 – 285 | °C | |
| Mold Temperature | 60 – 80 | °C | |

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

## DISCLAIMER