

LEXANTM FR RESINS LUX9230T

REGION ASIA

DESCRIPTION

LEXAN LUX9230T is an injection moldable polycarbonate (PC) with an MVR (300°C/1.2kg) 13. It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0@3.05mm rating. This is a transparent grade with high optical clarity and impact resistance. LUX9230T is available in transparent and tinted color options.

TYPICAL PROPERTY VALUES

Revision 20200610

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 62 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 67 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 125 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2270 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 101 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2150 | MPa | ASTM D 790 |
| Tensile Stress, yield, 50 mm/min | 63 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 60 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 6 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 85 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2350 | 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, notched, 23°C | 801 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 79 | J | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C | 10 | kJ/m ² | ISO 180/1A |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 143 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 137 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 126 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 6.84E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 7.38E-05 | 1/°C | ASTM E 831 |
| CTE, 23°C to 80°C, flow | 7.E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 80°C, xflow | 7.E-05 | 1/°C | ISO 11359-2 |
| Vicat Softening Temp, Rate B/50 | 141 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 142 | °C | ISO 306 |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm | 124 | °C | ISO 75/Ae |
| Relative Temp Index, Elec | 130 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 120 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 130 | °C | UL 746B |
| PHYSICAL | | | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------------------------|----------------|
| Specific Gravity | 1.19 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.6 – 0.8 | % | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf | 14 | g/10 min | ASTM D 1238 |
| 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 | 13 | cm ³ /10 min | ISO 1133 |
| ELECTRICAL | | | |
| Volume Resistivity | >1.E+15 | Ohm-cm | ASTM D 257 |
| Surface Resistivity | >1.E+15 | Ohm | ASTM D 257 |
| Dielectric Strength, in oil, 3.2 mm | 17 | kV/mm | ASTM D 149 |
| Relative Permittivity, 50/60 Hz | 2.7 | - | ASTM D 150 |
| Relative Permittivity, 1 MHz | 2.7 | - | ASTM D 150 |
| Dissipation Factor, 50/60 Hz | 0.001 | - | ASTM D 150 |
| Dissipation Factor, 1 MHz | 0.01 | - | ASTM D 150 |
| Arc Resistance, Tungsten {PLC} | 7 | PLC Code | ASTM D 495 |
| Hot Wire Ignition {PLC} | 1 | PLC Code | UL 746A |
| High Voltage Arc Track Rate {PLC} | 2 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 0 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 3 | PLC Code | UL 746A |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-2 Flame Class Rating | 0.8 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | 3.05 | 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 |
| Oxygen Index (LOI) | 35 | % | ISO 4589 |
| INJECTION MOLDING | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 2 – 4 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 280 – 310 | °C | |
| Nozzle Temperature | 270 – 290 | °C | |
| Front - Zone 3 Temperature | 280 – 310 | °C | |
| Middle - Zone 2 Temperature | 270 – 290 | °C | |
| Rear - Zone 1 Temperature | 260 – 280 | °C | |
| Hopper Temperature | 60 – 80 | °C | |
| Mold Temperature | 80 – 110 | °C | |

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