

LEXANTM FR RESINS 915R

REGION ASIA

DESCRIPTION

LEXAN 915R Polycarbonate (PC) is an injection moldable non-chlorinated and non-brominated, unfilled flame retardant grade with medium/high flow and good release. It has an MVR of 18 (300°C/1.2kg) and a UL94 V0@1.1mm, and is available in various opaque color options.

| INDUSTRY | SUB INDUSTRY |
|----------------------------|---|
| Automotive | Automotive Exteriors, Aerospace |
| Building and Construction | Construction |
| Consumer | Home Appliance, Personal Recreation, Recreational Vehicle |
| Electrical and Electronics | Electrical Devices and Displays, Lighting, Electrical Components and Infrastructure |
| Healthcare | Patient Testing |
| Mass Transportation | Specialty Vehicles, Rail |

TYPICAL PROPERTY VALUES

Revision 20190717

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|--------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 63 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 62 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 130 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2400 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 93 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2460 | MPa | ASTM D 790 |
| Hardness, Rockwell M | 70 | - | ASTM D 785 |
| Hardness, Rockwell R | 118 | - | ASTM D 785 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 747 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 67 | J | ASTM D 3763 |
| Izod Impact, unnotched, 23°C | NB | J/m | ASTM D 4812 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 138 | °C | ASTM D 1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 132 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 123 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 7.38E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 7.02E-05 | 1/°C | ASTM E 831 |
| Thermal Conductivity | 0.2 | W/m-°C | ASTM C177 |
| Specific Heat | 1.25 | J/g-°C | ASTM C 351 |
| 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 | 125 | °C | UL 746B |
| PHYSICAL | | | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|--------------------------------|-----------|----------------|
| Specific Gravity | 1.2 | - | ASTM D 792 |
| Moisture Absorption, 50% RH, 24 hrs | 0.15 | % | ASTM D 570 |
| Water Absorption, 24 hours | 0.15 | % | ASTM D 570 |
| Water Absorption, equilibrium, 23C | 0.35 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.6 – 0.8 | % | SABIC method |
| Melt Flow Rate, 300°C/ 1.2 kgf | 18 | g/ 10 min | ASTM D 1238 |
| ELECTRICAL | | | |
| Arc Resistance, Tungsten {PLC} | 7 | PLC Code | ASTM D 495 |
| Hot Wire Ignition {PLC} | 2 | PLC Code | UL 746A |
| High Voltage Arc Track Rate {PLC} | 0 | 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 |
| FLAME CHARACTERISTICS | | | |
| UL Yellow Card Link | E207780-228400 | - | - |
| UL Recognized, 94V-0 Flame Class Rating | 1.1 | mm | UL 94 |
| Glow Wire Flammability Index 850°C, passes at | 1 | mm | IEC 60695-2-12 |
| Glow Wire Flammability Index 960°C, passes at | 1.6 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 0.8 mm | 800 | °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 | 290 – 310 | °C | |
| Nozzle Temperature | 280 – 305 | °C | |
| Front - Zone 3 Temperature | 290 – 310 | °C | |
| Middle - Zone 2 Temperature | 275 – 300 | °C | |
| Rear - Zone 1 Temperature | 265 – 290 | °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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