

LEXANTM FR RESINS 915AU

REGION EUROPE

DESCRIPTION

LEXAN 915AU Polycarbonate (PC) is an injection moldable non-chlorinated and non-brominated, unfilled, transparent flame retardant grade with high flow. It is UV stabilized and has an MVR of 21 (300°C/1.2kg) and a UL94 V0@3mm, and is available in a variety of colors.

| INDUSTRY | SUB INDUSTRY |
|----------------------------|---|
| Consumer | Commercial Appliance |
| Electrical and Electronics | Electrical Devices and Displays, Electrical Components and Infrastructure |
| Packaging | Food & Beverage |

TYPICAL PROPERTY VALUES

Revision 20190424

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 66 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 66 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 100 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 2400 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 95 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2400 | MPa | ASTM D 790 |
| Tensile Stress, yield, 50 mm/min | 66 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 66 | 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 | 2400 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 98 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2400 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 650 | J/m | ASTM D 256 |
| Izod Impact, notched, -30°C | 110 | J/m | ASTM D 256 |
| Instrumented Impact Total Energy, 23°C | 60 | J | ASTM D 3763 |
| 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 | 65 | 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 | 65 | 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 |
| Charpy Impact, notched, 23°C | 11 | kJ/m ² | ISO 179/2C |
| THERMAL | | | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------------------------|--------------|
| Vicat Softening Temp, Rate B/50 | 140 | °C | ASTM D 1525 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 125 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 7.E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 7.E-05 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 7.E-05 | 1/°C | ISO 11359-2 |
| Vicat Softening Temp, Rate B/50 | 140 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 141 | °C | ISO 306 |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm | 134 | °C | ISO 75/Be |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm | 123 | °C | ISO 75/Ae |
| PHYSICAL | | | |
| Specific Gravity | 1.2 | - | ASTM D 792 |
| Mold Shrinkage on Tensile Bar, flow | 0.5 – 0.7 | % | SABIC method |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf | 23 | g/10 min | ASTM D 1238 |
| Density | 1.2 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 0.35 | % | ISO 62 |
| Moisture Absorption (23°C / 50% RH) | 0.15 | % | ISO 62 |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 21 | cm ³ /10 min | ISO 1133 |
| OPTICAL | | | |
| Light Transmission, 2.54 mm | 88 | % | ASTM D 1003 |
| Refractive Index | 1.586 | - | ISO 489 |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-2 Flame Class Rating | 1.5 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | 3 | mm | UL 94 |
| 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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