

LEXANTM FR RESINS 945A

REGION ASIA

DESCRIPTION

LEXAN 945A Polycarbonate (PC) is an injection moldable non-halogenated, unfilled transparent flame retardant grade with medium flow. It has an MVR of 10 (300°C/1.2kg) and a UL94 V0@3.0mm, and is available in various 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 | 2370 | MPa | ASTM D 790 |
| Hardness, Rockwell M | 70 | - | ASTM D 785 |
| Hardness, Rockwell R | 118 | - | ASTM D 785 |
| 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, unnotched, 23°C | NB | J/m | ASTM D 4812 |
| 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 |
| Specific Heat | 1.25 | J/g-°C | ASTM C 351 |
| Thermal Conductivity | 0.27 | W/m-°C | ASTM C 177 |
| 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 | | | |
| Specific Gravity | 1.19 | - | ASTM D 792 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.15 | % | ASTM D 570 |
| Water Absorption, (23°C/24hrs) | 0.15 | % | ASTM D 570 |
| Water Absorption, (23°C/Saturated) | 0.23 | % | ASTM D 570 |
| Mold Shrinkage, flow, 3.2 mm | 0.6 – 0.8 | % | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf | 10 | g/10 min | ASTM D 1238 |
| OPTICAL | | | |
| Light Transmission, 2.54 mm | >85 | % | ASTM D 1003 |
| Haze, 2.54 mm | 1 | % | ASTM D 1003 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|----------|----------------|
| 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} | 3 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 3 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 2 | PLC Code | UL 746A |
| FLAME CHARACTERISTICS | | | |
| UL Recognized, 94V-2 Flame Class Rating | 0.8 | mm | UL 94 |
| UL Recognized, 94V-1 Flame Class Rating | 2.5 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | 3.0 | 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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