# LEXAN™ FR RESIN BX7241

REGION ASIA

## DESCRIPTION

LEXAN BX7241 is based on Polycarbonate (PC) copolymer. It is an injection moldable non-chlorinated/brominated, unfilled flame retardant grade that has good impact and processability. It has an MVR of 18 (260°C/2.16kg), UL94 V0@0.6mm, 5VA at 3.0mm rating and is targeted for thin wall applications.

## TYPICAL PROPERTY VALUES

Revision 20260202

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 67 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 65 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 4.4 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 100 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 2500 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 107 | MPa | ASTM D790 |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 105 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2450 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 62 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 45 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 4.2 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 90 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2500 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 99 | MPa | ISO 178 |
| Flexural Stress, break, 2 mm/min | 98 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2600 | MPa | ISO 178 |
| IMPACT [1] | | | |
| Izod Impact, notched, 23°C | 690 | J/m | ASTM D256 |
| Izod Impact, notched, 0°C | 420 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 190 | J/m | ASTM D256 |
| Instrumented Dart Impact Total Energy, 23°C | 60 | J | ASTM D3763 |
| Izod Impact, notched 80*10*4 +23°C | 28 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 0°C | 11 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 11 | kJ/m² | ISO 180/1A |
| Charpy Impact, notched, 23°C, 80*10*4mm, Cut | 37 | kJ/m² | ISO 179/1eA |
| Charpy Impact, notched, 0°C, 80*10*4mm, Cut | 12 | kJ/m² | ISO 179/1eA |
| Charpy Impact, notched, -30°C, 80*10*4mm, Cut | 11 | kJ/m² | ISO 179/1eA |
| THERMAL [1] | | | |
| Vicat Softening Temp, Rate B/50 | 111 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 103 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 93 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 5.9E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 5.9E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, flow | 5.9E-05 | 1/°C | ISO 11359-2 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| CTE, -40°C to 40°C, xflow | 5.9E-05 | 1/°C | ISO 11359-2 |
| Ball Pressure Test, 75°C +/- 2°C | Pass | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 109 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 112 | °C | ISO 306 |
| Relative Temp Index, Elec [2] | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/impact [2] | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact [2] | 80 | °C | UL 746B |
| PHYSICAL [1] | | | |
| Specific Gravity | 1.2 | - | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm [3] | 0.4 – 0.6 | % | SABIC method |
| Melt Flow Rate, 260°C/2.16 kgf | 18 | g/10 min | ASTM D1238 |
| Water Absorption, (23°C/saturated) | 0.2 | % | ISO 62-1 |
| Moisture Absorption (23°C / 50% RH) | 0.1 | % | ISO 62 |
| Melt Volume Rate, MVR at 260°C/2.16 kg | 18 | cm³/10 min | ISO 1133 |
| ELECTRICAL [1] | | | |
| Volume Resistivity | >1.E+16 | Ω.cm | ASTM D257 |
| Surface Resistivity | >2.E+15 | Ω | ASTM D257 |
| FLAME CHARACTERISTICS [2] | | | |
| UL Yellow Card Link | E207780-102078504 | - | - |
| UL Recognized, 94V-0 Flame Class Rating | ≥0.5 | mm | UL 94 |
| UL Recognized, 94V-1 Flame Class Rating | ≥0.5 | mm | UL 94 |
| UL Recognized, 94V-2 Flame Class Rating | ≥0.2 | mm | UL 94 |
| Glow Wire Flammability Index 960°C, passes at [4] | 0.75 | mm | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 1.0 mm [4] | 800 | °C | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 1.5 mm [4] | 825 | °C | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 3.0 mm [4] | 825 | °C | IEC 60695-2-13 |
| INJECTION MOLDING [5] | | | |
| Drying Temperature | 80 – 90 | °C | |
| Drying Time | 2 – 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 250 – 300 | °C | |
| Nozzle Temperature | 250 – 300 | °C | |
| Front - Zone 3 Temperature | 250 – 300 | °C | |
| Middle - Zone 2 Temperature | 240 – 290 | °C | |
| Rear - Zone 1 Temperature | 230 – 280 | °C | |
| Hopper Temperature | 60 – 80 | °C | |
| Mold Temperature | 60 – 85 | °C | |
| Vent Depth | 0.03 - 0.075 | mm | |

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(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
(2) 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.
(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.,The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
(4) Value shown here is based on internal measurement.
(5) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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