

# LEXAN<sup>TM</sup> FR RESINS 955AU

REGION ASIA

## DESCRIPTION

LEXAN 955AU Polycarbonate (PC) is an injection moldable non-halogenated, unfilled transparent flame retardant grade with high viscosity. It is UV stabilized and has an MVR of 7(300°C/1.2kg) and a UL94 V0@3mm, and is available in various color options.

## TYPICAL PROPERTY VALUES

Revision 20191031

| PROPERTIES                                   | TYPICAL VALUES | UNITS    | TEST METHODS |
|----------------------------------------------|----------------|----------|--------------|
| <b>MECHANICAL</b>                            |                |          |              |
| 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   |
| <b>IMPACT</b>                                |                |          |              |
| Izod Impact, notched, 23°C                   | 801            | J/m      | ASTM D 256   |
| Instrumented Impact Total Energy, 23°C       | 79             | J        | ASTM D 3763  |
| <b>THERMAL</b>                               |                |          |              |
| 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   |
| 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      |
| <b>PHYSICAL</b>                              |                |          |              |
| 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                | 7              | g/10 min | ASTM D 1238  |
| <b>OPTICAL</b>                               |                |          |              |
| Light Transmission, 2.54 mm                  | >85            | %        | ASTM D 1003  |
| Haze, 2.54 mm                                | 1              | %        | ASTM D 1003  |
| <b>ELECTRICAL</b>                            |                |          |              |
| 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}           | 2              | PLC Code | UL 746A      |
| Comparative Tracking Index (UL) {PLC}        | 3              | PLC Code | UL 746A      |
| <b>FLAME CHARACTERISTICS</b>                 |                |          |              |
| UL Recognized, 94V-2 Flame Class Rating      | 0.8            | mm       | UL 94        |

| PROPERTIES                                    | TYPICAL VALUES | UNITS | TEST METHODS   |
|-----------------------------------------------|----------------|-------|----------------|
| 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    | 875            | °C    | IEC 60695-2-13 |
| UV-light, water exposure/immersion            | F1             | -     | UL 746C        |
| <b>INJECTION MOLDING</b>                      |                |       |                |
| Drying Temperature                            | 120            | °C    |                |
| Drying Time                                   | 2 – 4          | hrs   |                |
| Maximum Moisture Content                      | 0.02           | %     |                |
| Melt Temperature                              | 290 – 320      | °C    |                |
| Nozzle Temperature                            | 280 – 310      | °C    |                |
| Front - Zone 3 Temperature                    | 290 – 320      | °C    |                |
| Middle - Zone 2 Temperature                   | 280 – 310      | °C    |                |
| Rear - Zone 1 Temperature                     | 270 – 300      | °C    |                |
| Hopper Temperature                            | 60 – 80        | °C    |                |
| Mold Temperature                              | 80 – 120       | °C    |                |

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