

# LEXAN™ LUX9130C resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

## Message:

Lexan\* LUX9130C Polycarbonate (PC) resin is a non-filled, injection moldable grade. This non-chlorinated, non-brominated flame retardant PC has an UL-94 V0 rating at 1.5 mm, high flow capability and is UV stabilized providing additional weathering capability. Lexan\* LUX9130C is available in clear transparent and tinted color options that is an excellent candidate for a wide variety of applications.

| General Information                        |                         |                        |                 |
|--------------------------------------------|-------------------------|------------------------|-----------------|
| UL YellowCard                              | E207780-101088463       |                        |                 |
| Additive                                   | UV Stabilizer           |                        |                 |
| Features                                   | Bromine Free            |                        |                 |
|                                            | Chlorine Free           |                        |                 |
|                                            | Flame Retardant         |                        |                 |
|                                            | Good Weather Resistance |                        |                 |
|                                            | High Flow               |                        |                 |
| Appearance                                 | Clear/Transparent       |                        |                 |
|                                            | Colors Available        |                        |                 |
| Processing Method                          | Injection Molding       |                        |                 |
| Physical                                   | Nominal Value           | Unit                   | Test Method     |
| Specific Gravity                           |                         |                        |                 |
| --                                         | 1.19                    | g/cm <sup>3</sup>      | ASTM D792       |
| --                                         | 1.20                    | g/cm <sup>3</sup>      | ISO 1183        |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)   | 18                      | g/10 min               | ASTM D1238      |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg) | 17.0                    | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage                          |                         |                        | Internal Method |
| Flow : 3.20 mm                             | 0.55 to 0.75            | %                      |                 |
| Across Flow : 3.20 mm                      | 0.60 to 0.80            | %                      |                 |
| Water Absorption                           |                         |                        | ISO 62          |
| Saturation, 23°C                           | 0.13                    | %                      |                 |
| Equilibrium, 23°C, 50% RH                  | 0.11                    | %                      |                 |
| Outdoor Suitability                        | f1                      |                        | UL 746C         |
| Mechanical                                 | Nominal Value           | Unit                   | Test Method     |
| Tensile Modulus                            |                         |                        |                 |
| -- <sup>1</sup>                            | 2400                    | MPa                    | ASTM D638       |
| --                                         | 2300                    | MPa                    | ISO 527-2/1     |
| Tensile Strength                           |                         |                        |                 |
| Yield <sup>2</sup>                         | 67.0                    | MPa                    | ASTM D638       |

|                                                 |               |                   |                          |
|-------------------------------------------------|---------------|-------------------|--------------------------|
| Yield                                           | 63.0          | MPa               | ISO 527-2/50             |
| Break <sup>3</sup>                              | 54.0          | MPa               | ASTM D638                |
| Break                                           | 57.0          | MPa               | ISO 527-2/50             |
| Tensile Elongation                              |               |                   |                          |
| Yield <sup>4</sup>                              | 6.0           | %                 | ASTM D638                |
| Yield                                           | 6.0           | %                 | ISO 527-2/50             |
| Break <sup>5</sup>                              | 80            | %                 | ASTM D638                |
| Break                                           | 73            | %                 | ISO 527-2/50             |
| Flexural Modulus                                |               |                   |                          |
| 50.0 mm Span <sup>6</sup>                       | 2400          | MPa               | ASTM D790                |
| -- <sup>7</sup>                                 | 2400          | MPa               | ISO 178                  |
| Flexural Stress                                 |               |                   |                          |
| --                                              | 96.0          | MPa               | ISO 178                  |
| Yield, 50.0 mm Span <sup>8</sup>                | 103           | MPa               | ASTM D790                |
| Impact                                          | Nominal Value | Unit              | Test Method              |
| Charpy Notched Impact Strength <sup>9</sup>     |               |                   | ISO 179/1eA              |
| -30°C                                           | 9.0           | kJ/m <sup>2</sup> |                          |
| 23°C                                            | 10            | kJ/m <sup>2</sup> |                          |
| Charpy Unnotched Impact Strength <sup>10</sup>  |               |                   | ISO 179/1eU              |
| -30°C                                           | No Break      |                   |                          |
| 23°C                                            | No Break      |                   |                          |
| Notched Izod Impact                             |               |                   |                          |
| -30°C                                           | 85            | J/m               | ASTM D256                |
| 23°C                                            | 100           | J/m               | ASTM D256                |
| -30°C <sup>11</sup>                             | 9.0           | kJ/m <sup>2</sup> | ISO 180/1A               |
| 23°C <sup>12</sup>                              | 10            | kJ/m <sup>2</sup> | ISO 180/1A               |
| Unnotched Izod Impact                           |               |                   | ASTM D4812, ISO 180/1U   |
| -30°C                                           | No Break      |                   |                          |
| 23°C                                            | No Break      |                   |                          |
| Instrumented Dart Impact (23°C, Total Energy)   |               |                   | ASTM D3763               |
| 65.0                                            | J             |                   |                          |
| Thermal                                         | Nominal Value | Unit              | Test Method              |
| Deflection Temperature Under Load               |               |                   |                          |
| 0.45 MPa, Unannealed, 3.20 mm                   | 130           | °C                | ASTM D648                |
| 0.45 MPa, Unannealed, 100 mm Span <sup>13</sup> | 131           | °C                | ISO 75-2/Be              |
| 1.8 MPa, Unannealed, 3.20 mm                    | 120           | °C                | ASTM D648                |
| 1.8 MPa, Unannealed, 100 mm Span <sup>14</sup>  | 121           | °C                | ISO 75-2/Ae              |
| Vicat Softening Temperature                     |               |                   |                          |
| --                                              | 136           | °C                | ASTM D1525 <sup>15</sup> |
| --                                              | 139           | °C                | ISO 306/B50              |
| --                                              | 140           | °C                | ISO 306/B120             |
| Ball Pressure Test (125°C)                      | Pass          |                   | IEC 60695-10-2           |

|                                          |                   |          |                |
|------------------------------------------|-------------------|----------|----------------|
| CLTE                                     |                   |          |                |
| Flow : -40 to 40°C                       | 6.8E-5            | cm/cm/°C | ASTM E831      |
| Flow : 23 to 80°C                        | 7.7E-5            | cm/cm/°C | ISO 11359-2    |
| Transverse : -40 to 40°C                 | 7.0E-5            | cm/cm/°C | ASTM E831      |
| Transverse : 23 to 80°C                  | 8.0E-5            | cm/cm/°C | ISO 11359-2    |
| RTI Elec                                 | 130               | °C       | UL 746         |
| RTI Imp                                  | 120               | °C       | UL 746         |
| RTI Str                                  | 130               | °C       | UL 746         |
| Electrical                               | Nominal Value     | Unit     | Test Method    |
| Dielectric Constant (1.10 GHz)           | 2.78              |          | ASTM E57-83    |
| Dissipation Factor (1.10 GHz)            | 5.6E-3            |          | ASTM E57-83    |
| Flammability                             | Nominal Value     | Unit     | Test Method    |
| Flame Rating                             |                   |          | UL 94          |
| 0.400 mm                                 | V-2               |          |                |
| 1.50 mm                                  | V-0               |          |                |
| Glow Wire Flammability Index (1.50 mm)   | 960               | °C       | IEC 60695-2-12 |
| Glow Wire Ignition Temperature (1.50 mm) | 850               | °C       | IEC 60695-2-13 |
| Optical                                  | Nominal Value     | Unit     | Test Method    |
| Transmittance (2540 µm)                  | > 91.0            | %        | ASTM D1003     |
| Injection                                | Nominal Value     | Unit     |                |
| Drying Temperature                       | 121               | °C       |                |
| Drying Time                              | 3.0 to 4.0        | hr       |                |
| Drying Time, Maximum                     | 48                | hr       |                |
| Suggested Max Moisture                   | 0.020             | %        |                |
| Suggested Shot Size                      | 40 to 60          | %        |                |
| Rear Temperature                         | 260 to 282        | °C       |                |
| Middle Temperature                       | 271 to 293        | °C       |                |
| Front Temperature                        | 282 to 304        | °C       |                |
| Nozzle Temperature                       | 277 to 299        | °C       |                |
| Processing (Melt) Temp                   | 282 to 304        | °C       |                |
| Mold Temperature                         | 71.1 to 93.3      | °C       |                |
| Back Pressure                            | 0.345 to 0.689    | MPa      |                |
| Screw Speed                              | 40 to 70          | rpm      |                |
| Vent Depth                               | 0.025 to 0.076    | mm       |                |
| NOTE                                     |                   |          |                |
| 1.                                       | 50 mm/min         |          |                |
| 2.                                       | Type I, 50 mm/min |          |                |
| 3.                                       | Type I, 50 mm/min |          |                |
| 4.                                       | Type I, 50 mm/min |          |                |
| 5.                                       | Type I, 50 mm/min |          |                |
| 6.                                       | 1.3 mm/min        |          |                |
| 7.                                       | 2.0 mm/min        |          |                |

|     |                                    |
|-----|------------------------------------|
| 8.  | 1.3 mm/min                         |
| 9.  | 80*10*3 sp=62mm                    |
| 10. | 80*10*3 sp=62mm                    |
| 11. | 80*10*3                            |
| 12. | 80*10*3                            |
| 13. | 120*10*4 mm                        |
| 14. | 120*10*4 mm                        |
| 15. | Rate B (120°C/h), Loading 2 (50 N) |

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