

# LEXAN™ LUX9230T resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

## Message:

LUX9230T Polycarbonate (PC) resin is a non-filled, UV within, injection moldable grade. This halogen-free flame retardant PC has a V0 UL rating and melt flow rate (MFR) of 14. It is intended to meet with all environmental labels and requirements. LUX9230T is available in transparent and tinted color options and is a general-purpose resin potentially for a wide variety of applications.

| General Information                        |                   |                        |                 |
|--------------------------------------------|-------------------|------------------------|-----------------|
| Additive                                   | Flame Retardant   |                        |                 |
| Features                                   | Flame Retardant   |                        |                 |
|                                            | General Purpose   |                        |                 |
|                                            | Halogen Free      |                        |                 |
| Uses                                       | General Purpose   |                        |                 |
| 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)   | 14                | g/10 min               | ASTM D1238      |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg) | 13.0              | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage - Flow (3.20 mm)         | 0.60 to 0.80      | %                      | Internal Method |
| Water Absorption                           |                   |                        | ISO 62          |
| Saturation, 23°C                           | 0.35              | %                      |                 |
| Equilibrium, 23°C, 50% RH                  | 0.15              | %                      |                 |
| Mechanical                                 | Nominal Value     | Unit                   | Test Method     |
| Tensile Modulus                            |                   |                        |                 |
| -- <sup>1</sup>                            | 2280              | MPa                    | ASTM D638       |
| --                                         | 2350              | MPa                    | ISO 527-2/1     |
| Tensile Strength                           |                   |                        |                 |
| Yield <sup>2</sup>                         | 62.1              | MPa                    | ASTM D638       |
| Yield                                      | 63.0              | MPa                    | ISO 527-2/50    |
| Break <sup>3</sup>                         | 67.6              | MPa                    | ASTM D638       |
| Break                                      | 60.0              | 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>                             | 130           | %                 | ASTM D638                |
| Break                                          | 85            | %                 | ISO 527-2/50             |
| Flexural Modulus                               |               |                   |                          |
| 50.0 mm Span <sup>6</sup>                      | 2150          | MPa               | ASTM D790                |
| -- <sup>7</sup>                                | 2300          | MPa               | ISO 178                  |
| Flexural Stress                                |               |                   |                          |
| --                                             | 90.0          | MPa               | ISO 178                  |
| Yield, 50.0 mm Span <sup>8</sup>               | 101           | MPa               | ASTM D790                |
| Impact                                         | Nominal Value | Unit              | Test Method              |
| Notched Izod Impact                            |               |                   |                          |
| 23°C                                           | 800           | J/m               | ASTM D256                |
| 23°C <sup>9</sup>                              | 10            | kJ/m <sup>2</sup> | ISO 180/1A               |
| Instrumented Dart Impact (23°C, Total Energy)  | 79.1          | J                 | ASTM D3763               |
| Thermal                                        | Nominal Value | Unit              | Test Method              |
| Deflection Temperature Under Load              |               |                   |                          |
| 0.45 MPa, Unannealed, 3.20 mm                  | 138           | °C                | ASTM D648                |
| 1.8 MPa, Unannealed, 3.20 mm                   | 127           | °C                | ASTM D648                |
| 1.8 MPa, Unannealed, 100 mm Span <sup>10</sup> | 124           | °C                | ISO 75-2/Ae              |
| Vicat Softening Temperature                    |               |                   |                          |
| --                                             | 143           | °C                | ASTM D1525 <sup>11</sup> |
| --                                             | 141           | °C                | ISO 306/B50              |
| --                                             | 142           | °C                | ISO 306/B120             |
| CLTE                                           |               |                   |                          |
| Flow : -40 to 40°C                             | 6.8E-5        | cm/cm/°C          | ASTM E831                |
| Flow : 23 to 80°C                              | 7.0E-5        | cm/cm/°C          | ISO 11359-2              |
| Transverse : -40 to 40°C                       | 7.4E-5        | cm/cm/°C          | ASTM E831                |
| Transverse : 23 to 80°C                        | 7.0E-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              |
| Surface Resistivity                            | > 1.0E+15     | ohms              | ASTM D257                |
| Volume Resistivity                             | > 1.0E+15     | ohms · cm         | ASTM D257                |
| Dielectric Strength (3.20 mm, in Oil)          | 17            | kV/mm             | ASTM D149                |
| Dielectric Constant                            |               |                   | ASTM D150                |
| 50 Hz                                          | 2.70          |                   |                          |
| 60 Hz                                          | 2.70          |                   |                          |
| 1 MHz                                          | 2.70          |                   |                          |
| Dissipation Factor                             |               |                   | ASTM D150                |
| 50 Hz                                          | 1.0E-3        |                   |                          |

| 60 Hz                                    | 1.0E-3                             |      |                |
|------------------------------------------|------------------------------------|------|----------------|
| 1 MHz                                    | 0.010                              |      |                |
| Arc Resistance <sup>12</sup>             | PLC 7                              |      | ASTM D495      |
| Comparative Tracking Index (CTI)         | PLC 3                              |      | UL 746         |
| High Amp Arc Ignition (HAI)              | PLC 0                              |      | UL 746         |
| High Voltage Arc Tracking Rate (HVTR)    | PLC 2                              |      | UL 746         |
| Hot-wire Ignition (HWI)                  | PLC 1                              |      | UL 746         |
| Flammability                             | Nominal Value                      | Unit | Test Method    |
| Flame Rating                             |                                    |      | UL 94          |
| 0.800 mm                                 | V-2                                |      |                |
| 3.05 mm                                  | V-0                                |      |                |
| Glow Wire Flammability Index (1.00 mm)   | 960                                | °C   | IEC 60695-2-12 |
| Glow Wire Ignition Temperature (1.00 mm) | 850                                | °C   | IEC 60695-2-13 |
| Oxygen Index                             | 35                                 | %    | ISO 4589-2     |
| Injection                                | Nominal Value                      | Unit |                |
| Drying Temperature                       | 120                                | °C   |                |
| Drying Time                              | 2.0 to 4.0                         | hr   |                |
| Suggested Max Moisture                   | 0.020                              | %    |                |
| Hopper Temperature                       | 60.0 to 80.0                       | °C   |                |
| Rear Temperature                         | 260 to 280                         | °C   |                |
| Middle Temperature                       | 270 to 290                         | °C   |                |
| Front Temperature                        | 280 to 310                         | °C   |                |
| Nozzle Temperature                       | 270 to 290                         | °C   |                |
| Processing (Melt) Temp                   | 280 to 310                         | °C   |                |
| Mold Temperature                         | 80.0 to 110                        | °C   |                |
| 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*4                            |      |                |
| 10.                                      | 120*10*4 mm                        |      |                |
| 11.                                      | Rate B (120°C/h), Loading 2 (50 N) |      |                |
| 12.                                      | Tungsten Electrode                 |      |                |

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