



# LEXANT™ FR RESINS LUX9610

REGION EUROPE

## DESCRIPTION

LEXANT™ LUX9610 resin is a 7 MFR polycarbonate, MVR of 7. UV stabilized. Non-brominated and non-chlorinated flame retardant, UL94 V0 rated. UL746C f2 rated. Transparent grade. High optical clarity with impact resistance. Injection moldable.

## TYPICAL PROPERTY VALUES

Revision 20230726

| PROPERTIES                                  | TYPICAL VALUES | UNITS             | TEST METHODS   |
|---|----------------|-------------------|----------------|
| <b>MECHANICAL</b>                           |                |                   |                |
| Hardness, Rockwell R                        | 118            | -                 | ASTM D785      |
| Tensile Stress, yield, 50 mm/min            | 62             | MPa               | ISO 527        |
| Tensile Stress, break, 50 mm/min            | 58             | MPa               | ISO 527        |
| Tensile Strain, yield, 50 mm/min            | 6              | %                 | ISO 527        |
| Tensile Strain, break, 50 mm/min            | 77             | %                 | ISO 527        |
| Tensile Modulus, 1 mm/min                   | 2230           | MPa               | ISO 527        |
| Flexural Stress, yield, 2 mm/min            | 94             | MPa               | ISO 178        |
| Flexural Modulus, 2 mm/min                  | 2250           | MPa               | ISO 178        |
| <b>IMPACT</b>                               |                |                   |                |
| Izod Impact, unnotched, 23°C                | NB             | J/m               | ASTM D4812     |
| Izod Impact, notched, 23°C                  | 760            | J/m               | ASTM D256      |
| Multiaxial Impact                           | 130            | J                 | ISO 6603       |
| Izod Impact, unnotched 80*10*3 +23°C        | NB             | kJ/m <sup>2</sup> | ISO 180/1U     |
| Izod Impact, unnotched 80*10*3 -30°C        | NB             | kJ/m <sup>2</sup> | ISO 180/1U     |
| Izod Impact, notched 80*10*3 +23°C          | 70             | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod Impact, notched 80*10*3 -30°C          | 11             | kJ/m <sup>2</sup> | ISO 180/1A     |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm  | 68             | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 12             | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm  | NB             | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm | NB             | kJ/m <sup>2</sup> | ISO 179/1eU    |
| <b>THERMAL</b>                              |                |                   |                |
| CTE, -40°C to 40°C, flow                    | 6.8E-05        | 1/°C              | ASTM E831      |
| CTE, -40°C to 40°C, xflow                   | 6.7E-05        | 1/°C              | ASTM E831      |
| Specific Heat                               | 1.26           | J/g·°C            | ASTM C351      |
| Thermal Conductivity                        | 0.2            | W/m·°C            | ASTM C177      |
| Ball Pressure Test, 125°C +/- 2°C           | PASSES         | -                 | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50             | 143            | °C                | ISO 306        |
| Vicat Softening Temp, Rate B/120            | 145            | °C                | ISO 306        |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm       | 125            | °C                | ISO 75/Af      |
| Relative Temp Index, Elec                   | 125            | °C                | UL 746B        |
| Relative Temp Index, Mech w/impact          | 115            | °C                | UL 746B        |
| Relative Temp Index, Mech w/o impact        | 125            | °C                | UL 746B        |
| <b>PHYSICAL</b>                             |                |                   |                |
| Water Absorption, equilibrium, 100°C        | 0.58           | %                 | ASTM D570      |



| PROPERTIES                                    | TYPICAL VALUES                   | UNITS                   | TEST METHODS   |
|---|----------------------------------|-------------------------|----------------|
| Mold Shrinkage, flow, 3.2 mm                  | 0.6 – 0.8                        | %                       | SABIC method   |
| Density                                       | 1.2                              | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/saturated)            | 0.35                             | %                       | ISO 62-1       |
| Moisture Absorption (23°C / 50% RH)           | 0.15                             | %                       | ISO 62         |
| Melt Volume Rate, MVR at 300°C/ 1.2 kg        | 7                                | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>OPTICAL</b>                                |                                  |                         |                |
| Light Transmission, 2.54 mm                   | >90                              | %                       | ASTM D1003     |
| Haze, 2mm                                     | 1                                | %                       | SABIC method   |
| Refractive Index                              | 1.586                            | -                       | ISO 489        |
| <b>ELECTRICAL</b>                             |                                  |                         |                |
| Dielectric Strength, in air, 3.2 mm           | 15                               | kV/mm                   | ASTM D149      |
| Relative Permittivity, 50/60 Hz               | 3.17                             | -                       | ASTM D150      |
| Relative Permittivity, 1 MHz                  | 2.96                             | -                       | ASTM D150      |
| Dissipation Factor, 50/60 Hz                  | 0.0009                           | -                       | ASTM D150      |
| Dissipation Factor, 1 MHz                     | 0.01                             | -                       | ASTM D150      |
| Hot Wire Ignition {PLC}                       | 3                                | PLC Code                | UL 746A        |
| High Ampere Arc Ign, surface {PLC}            | 1                                | PLC Code                | UL 746A        |
| Comparative Tracking Index (UL) {PLC}         | 3                                | PLC Code                | UL 746A        |
| Volume Resistivity                            | >1.E+15                          | Ω.cm                    | IEC 60093      |
| <b>FLAME CHARACTERISTICS</b>                  |                                  |                         |                |
| UL Yellow Card Link                           | <a href="#">E45329-101309095</a> | -                       | -              |
| UL Recognized, 94V-2 Flame Class Rating       | 0.3                              | mm                      | UL 94          |
| UL Recognized, 94V-0 Flame Class Rating       | 1.5                              | mm                      | UL 94          |
| Glow Wire Flammability Index 750°C, passes at | 0.8                              | mm                      | IEC 60695-2-12 |
| Glow Wire Flammability Index 850°C, passes at | 1.5                              | mm                      | IEC 60695-2-12 |
| 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 |
| Glow Wire Ignitability Temperature, 1.5 mm    | 850                              | °C                      | IEC 60695-2-13 |
| UV-light, water exposure/immersion            | F2                               | -                       | UL 746C        |
| <b>INJECTION MOLDING</b>                      |                                  |                         |                |
| Drying Temperature                            | 120                              | °C                      |                |
| Drying Time                                   | 2 – 4                            | Hrs                     |                |
| Maximum Moisture Content                      | 0.02                             | %                       |                |
| Melt Temperature                              | 280 – 300                        | °C                      |                |
| Nozzle Temperature                            | 270 – 290                        | °C                      |                |
| Front - Zone 3 Temperature                    | 280 – 300                        | °C                      |                |
| Middle - Zone 2 Temperature                   | 270 – 290                        | °C                      |                |
| Rear - Zone 1 Temperature                     | 260 – 280                        | °C                      |                |
| Hopper Temperature                            | 60 – 80                          | °C                      |                |
| Mold Temperature                              | 80 – 100                         | °C                      |                |



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