



# LEXANT™ RESIN 203R

REGION EUROPE

## DESCRIPTION

LEXANT™ 203R resin is a 7 MFR polycarbonate, MVR of 6. UV stabilized. Mold release. Flame retardant grade, UL94 V2 rated. UL746C f1 rated. For extrusion and injection molding.

## TYPICAL PROPERTY VALUES

Revision 20201125

| PROPERTIES                                  | TYPICAL VALUES | UNITS     | TEST METHODS   |
|---------------------------------------------|----------------|-----------|----------------|
| MECHANICAL                                  |                |           |                |
| Taber Abrasion, CS-17, 1 kg                 | 10             | mg/1000cy | SABIC method   |
| Tensile Stress, yield, 50 mm/min            | 63             | MPa       | ISO 527        |
| Tensile Stress, break, 50 mm/min            | 70             | MPa       | ISO 527        |
| Tensile Strain, yield, 50 mm/min            | 6              | %         | ISO 527        |
| Tensile Strain, break, 50 mm/min            | 120            | %         | ISO 527        |
| Tensile Modulus, 1 mm/min                   | 2350           | MPa       | ISO 527        |
| Flexural Stress, yield, 2 mm/min            | 90             | MPa       | ISO 178        |
| Flexural Modulus, 2 mm/min                  | 2300           | MPa       | ISO 178        |
| Ball Indentation Hardness, H358/30          | 95             | MPa       | ISO 2039-1     |
| IMPACT                                      |                |           |                |
| Izod Impact, unnotched 80°10°3 +23°C        | NB             | kJ/m²     | ISO 180/1U     |
| Izod Impact, unnotched 80°10°3 -30°C        | NB             | kJ/m²     | ISO 180/1U     |
| Izod Impact, notched 80°10°3 +23°C          | 70             | kJ/m²     | ISO 180/1A     |
| Izod Impact, notched 80°10°3 -30°C          | 12             | kJ/m²     | ISO 180/1A     |
| Charpy 23°C, V-notch Edgew 80°10°3 sp=62mm  | 75             | kJ/m²     | ISO 179/1eA    |
| Charpy -30°C, V-notch Edgew 80°10°3 sp=62mm | 15             | kJ/m²     | ISO 179/1eA    |
| Charpy 23°C, Unnotch Edgew 80°10°3 sp=62mm  | NB             | kJ/m²     | ISO 179/1eU    |
| Charpy -30°C, Unnotch Edgew 80°10°3 sp=62mm | NB             | kJ/m²     | ISO 179/1eU    |
| Charpy Impact, notched, 23°C                | 35             | kJ/m²     | ISO 179/2C     |
| THERMAL                                     |                |           |                |
| Thermal Conductivity                        | 0.2            | W/m.°C    | ISO 8302       |
| CTE, 23°C to 80°C, flow                     | 7.E-05         | 1/°C      | ISO 11359-2    |
| Ball Pressure Test, 125°C +/- 2°C           | PASSES         | -         | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50             | 144            | °C        | ISO 306        |
| Vicat Softening Temp, Rate B/120            | 145            | °C        | ISO 306        |
| HDT/Be, 0.45MPa Edgew 120°10°4 sp=100mm     | 138            | °C        | ISO 75/Be      |
| HDT/Ae, 1.8 MPa Edgew 120°10°4 sp=100mm     | 127            | °C        | ISO 75/Ae      |
| Relative Temp Index, Elec                   | 130            | °C        | UL 746B        |
| Relative Temp Index, Mech w/impact          | 130            | °C        | UL 746B        |
| Relative Temp Index, Mech w/o impact        | 130            | °C        | UL 746B        |
| PHYSICAL                                    |                |           |                |
| Mold Shrinkage on Tensile Bar, flow         | 0.5 – 0.7      | %         | SABIC method   |
| Density                                     | 1.2            | g/cm³     | ISO 1183       |
| Water Absorption, (23°C/saturated)          | 0.35           | %         | ISO 62-1       |



| PROPERTIES                                    | TYPICAL VALUES   | UNITS       | TEST METHODS   |
|-----------------------------------------------|------------------|-------------|----------------|
| Moisture Absorption (23°C / 50% RH)           | 0.15             | %           | ISO 62         |
| Melt Volume Rate, MVR at 300°C/1.2 kg         | 6                | cm³/ 10 min | ISO 1133       |
| OPTICAL                                       |                  |             |                |
| Light Transmission, 2.54 mm                   | 88 – 90          | %           | ASTM D1003     |
| Haze, 2.54 mm                                 | <0.8             | %           | ASTM D1003     |
| Refractive Index                              | 1.586            | -           | ISO 489        |
| ELECTRICAL                                    |                  |             |                |
| Volume Resistivity                            | >1.E+15          | Ω.cm        | IEC 60093      |
| Surface Resistivity, ROA                      | >1.E+15          | Ω           | IEC 60093      |
| Dielectric Strength, in oil, 3.2 mm           | 17               | kV/mm       | IEC 60243-1    |
| Relative Permittivity, 1 MHz                  | 2.7              | -           | IEC 60250      |
| Dissipation Factor, 50/60 Hz                  | 0.001            | -           | IEC 60250      |
| Dissipation Factor, 1 MHz                     | 0.01             | -           | IEC 60250      |
| Relative Permittivity, 50/60 Hz               | 2.7              | -           | IEC 60250      |
| FLAME CHARACTERISTICS                         |                  |             |                |
| UL Yellow Card Link                           | E45329-103028645 | -           | -              |
| UL Yellow Card Link 2                         | E45329-236646    | -           | -              |
| UL Recognized, 94V-2 Flame Class Rating       | 0.75             | mm          | UL 94          |
| UL Recognized, 94V-0 Flame Class Rating       | 6                | mm          | UL 94          |
| Glow Wire Flammability Index 850°C, passes at | 1                | mm          | IEC 60695-2-12 |
| Oxygen Index (LOI)                            | 25               | %           | ISO 4589       |
| INJECTION MOLDING                             |                  |             |                |
| 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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