

# LEXANT™ RESIN 123M

REGION AMERICAS

## DESCRIPTION

LEXANT™ 123M resin is a 18 MFR polycarbonate. UV Stabilized. Improved internal mold release. UL94 HB rated.

## TYPICAL PROPERTY VALUES

Revision 20240229

| PROPERTIES                                   | TYPICAL VALUES                 | UNITS    | TEST METHODS |
|----------------------------------------------|--------------------------------|----------|--------------|
| <b>MECHANICAL</b>                            |                                |          |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 63                             | MPa      | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min       | 66                             | MPa      | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min       | 7                              | %        | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min       | 120                            | %        | ASTM D638    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 100                            | MPa      | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2350                           | MPa      | ASTM D790    |
| <b>IMPACT</b>                                |                                |          |              |
| Izod Impact, unnotched, 23°C                 | 2140                           | J/m      | ASTM D4812   |
| Izod Impact, notched, 23°C                   | 820                            | J/m      | ASTM D256    |
| Izod Impact, notched, -30°C                  | 200                            | J/m      | ASTM D256    |
| Falling Dart Impact (D 3029), 23°C           | 169                            | J        | ASTM D3029   |
| Instrumented Dart Impact Total Energy, 23°C  | 77                             | J        | ASTM D3763   |
| <b>THERMAL</b>                               |                                |          |              |
| Vicat Softening Temp, Rate B/50              | 143                            | °C       | ASTM D1525   |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 137                            | °C       | ASTM D648    |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 132                            | °C       | ASTM D648    |
| CTE, -40°C to 40°C, flow                     | 6.36E-05                       | 1/°C     | ASTM E831    |
| CTE, -40°C to 40°C, xflow                    | 6.5E-05                        | 1/°C     | ASTM E831    |
| Specific Heat                                | 1.26                           | J/g·°C   | ASTM C351    |
| Thermal Conductivity                         | 0.19                           | W/m·°C   | ASTM C177    |
| <b>PHYSICAL</b>                              |                                |          |              |
| Specific Gravity                             | 1.2                            | -        | ASTM D792    |
| Specific Volume                              | 0.83                           | cm³/g    | ASTM D792    |
| Density                                      | 1.19                           | g/cm³    | ASTM D792    |
| Water Absorption, (23°C/24hrs)               | 0.15                           | %        | ASTM D570    |
| Water Absorption, (23°C/Saturated)           | 0.35                           | %        | ASTM D570    |
| Water Absorption, equilibrium, 100°C         | 0.58                           | %        | ASTM D570    |
| Mold Shrinkage, flow, 3.2 mm                 | 0.5 – 0.8                      | %        | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf                | 17.5                           | g/10 min | ASTM D1238   |
| <b>OPTICAL</b>                               |                                |          |              |
| Light Transmission, 2.54 mm                  | 88                             | %        | ASTM D1003   |
| Haze, 2.54 mm                                | 1                              | %        | ASTM D1003   |
| Refractive Index                             | 1.586                          | -        | ASTM D542    |
| <b>FLAME CHARACTERISTICS</b>                 |                                |          |              |
| UL Yellow Card Link                          | <a href="#">E121562-220864</a> | -        | -            |

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|-----------------------------|----------------|-------|--------------|
| INJECTION MOLDING           |                |       |              |
| Drying Temperature          | 120            | °C    |              |
| Drying Time                 | 3 – 4          | Hrs   |              |
| Drying Time (Cumulative)    | 48             | Hrs   |              |
| Maximum Moisture Content    | 0.02           | %     |              |
| Melt Temperature            | 280 – 305      | °C    |              |
| Nozzle Temperature          | 275 – 300      | °C    |              |
| Front - Zone 3 Temperature  | 280 – 305      | °C    |              |
| Middle - Zone 2 Temperature | 270 – 295      | °C    |              |
| Rear - Zone 1 Temperature   | 260 – 280      | °C    |              |
| Mold Temperature            | 70 – 95        | °C    |              |
| Back Pressure               | 0.3 – 0.7      | MPa   |              |
| Screw Speed                 | 40 – 70        | rpm   |              |
| Shot to Cylinder Size       | 40 – 60        | %     |              |
| Vent Depth                  | 0.025 – 0.076  | mm    |              |

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