

## LEXANT™ RESIN 153R

REGION ASIA

### DESCRIPTION

LEXANT™ 153R resin is a 2.5 MFR Branched polycarbonate. UV Stabilized. Mold release. UL94 HB rated, designed for blow molding or extrusion.

### TYPICAL PROPERTY VALUES

Revision 20201125

| PROPERTIES                                   | TYPICAL VALUES | UNITS     | TEST METHODS |
|----------------------------------------------|----------------|-----------|--------------|
| <strong>MECHANICAL</strong>                  |                |           |              |
| Tensile Stress, yld, Type I, 50 mm/min       | 62             | MPa       | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min       | 65             | MPa       | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min       | 7              | %         | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min       | 110            | %         | ASTM D638    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 93             | MPa       | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2340           | MPa       | ASTM D790    |
| Hardness, Rockwell M                         | 70             | -         | ASTM D785    |
| Hardness, Rockwell R                         | 118            | -         | ASTM D785    |
| Taber Abrasion, CS-17, 1 kg                  | 10             | mg/1000cy | ASTM D1044   |
| <strong>IMPACT</strong>                      |                |           |              |
| Izod Impact, unnotched, 23°C                 | 3204           | J/m       | ASTM D4812   |
| Izod Impact, notched, 23°C                   | 747            | J/m       | ASTM D256    |
| Tensile Impact Strength, Type S              | 630            | kJ/m²     | ASTM D1822   |
| Falling Dart Impact (D 3029), 23°C           | 169            | J         | ASTM D3029   |
| <strong>THERMAL</strong>                     |                |           |              |
| Vicat Softening Temp, Rate B/50              | 157            | °C        | ASTM D1525   |
| HDT, 0.45 MPa, 6.4 mm, unannealed            | 137            | °C        | ASTM D648    |
| HDT, 1.82 MPa, 6.4 mm, unannealed            | 132            | °C        | ASTM D648    |
| CTE, -40°C to 95°C, flow                     | 6.84E-05       | 1/°C      | ASTM E831    |
| Specific Heat                                | 1.25           | J/g·°C    | ASTM C351    |
| Thermal Conductivity                         | 0.19           | W/m·°C    | ASTM C177    |
| <strong>PHYSICAL</strong>                    |                |           |              |
| 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 – 0.7      | %         | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf                | 2.5            | g/10 min  | ASTM D1238   |
| <strong>OPTICAL</strong>                     |                |           |              |
| Light Transmission, 2.54 mm                  | 88             | %         | ASTM D1003   |
| Haze, 2.54 mm                                | 1              | %         | ASTM D1003   |
| Refractive Index                             | 1.586          | -         | ASTM D542    |
| <strong>ELECTRICAL</strong>                  |                |           |              |

© 2024 Copyright by SABIC. All rights reserved

CHEMISTRY THAT MATTERS™



| PROPERTIES                          | TYPICAL VALUES                 | UNITS        | TEST METHODS |
|-------------------------------------|--------------------------------|--------------|--------------|
| Volume Resistivity                  | >1.E+16                        | $\Omega$ .cm | ASTM D257    |
| Dielectric Strength, in air, 3.2 mm | 14.9                           | 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    |
| FLAME CHARACTERISTICS               |                                |              |              |
| UL Yellow Card Link                 | <a href="#">E207780-228385</a> | -            | -            |
| INJECTION MOLDING                   |                                |              |              |
| Drying Temperature                  | 120                            | °C           |              |
| Drying Time                         | 3 – 4                          | Hrs          |              |
| Drying Time (Cumulative)            | 48                             | Hrs          |              |
| Maximum Moisture Content            | 0.02                           | %            |              |
| Melt Temperature                    | 320 – 345                      | °C           |              |
| Nozzle Temperature                  | 315 – 340                      | °C           |              |
| Front - Zone 3 Temperature          | 320 – 345                      | °C           |              |
| Middle - Zone 2 Temperature         | 310 – 330                      | °C           |              |
| Rear - Zone 1 Temperature           | 300 – 320                      | °C           |              |
| Mold Temperature                    | 80 – 115                       | °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           |              |
| EXTRUSION BLOW MOLDING              |                                |              |              |
| Drying Temperature                  | 120                            | °C           |              |
| Drying Time                         | 2 – 4                          | Hrs          |              |
| Maximum Moisture Content            | 0.02                           | %            |              |
| Minimum Moisture Content            | 0.01                           | %            |              |
| Melt Temperature (Parison)          | 265 – 280                      | °C           |              |
| Barrel - Zone 1 Temperature         | 260 – 290                      | °C           |              |
| Barrel - Zone 2 Temperature         | 260 – 290                      | °C           |              |
| Barrel - Zone 3 Temperature         | 260 – 290                      | °C           |              |
| Barrel - Zone 4 Temperature         | 260 – 290                      | °C           |              |
| Adapter - Zone 5 Temperature        | 260 – 290                      | °C           |              |
| Mold Temperature                    | 60 – 100                       | °C           |              |

#### DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

