

## Lexan\* Resin ML1655R

## Americas: LIMITED USE

For existing applications only.

### Property

| TYPICAL PROPERTIES <sup>(1)</sup>            |           |          |              |
|----------------------------------------------|-----------|----------|--------------|
| MECHANICAL                                   | Value     | Unit     | Standard     |
| Tensile Stress, yld, Type I, 50 mm/min       | 62        | MPa      | ASTM D 638   |
| Tensile Stress, brk, Type I, 50 mm/min       | 55        | MPa      | ASTM D 638   |
| Tensile Strain, yld, Type I, 50 mm/min       | 7         | %        | ASTM D 638   |
| Tensile Strain, brk, Type I, 50 mm/min       | 90        | %        | ASTM D 638   |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 91        | MPa      | ASTM D 790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2240      | MPa      | ASTM D 790   |
| Hardness, Rockwell R                         | 118       | -        | ASTM D 785   |
| IMPACT                                       | Value     | Unit     | Standard     |
| Izod Impact, notched, 23°C                   | 640       | J/m      | ASTM D 256   |
| THERMAL                                      | Value     | Unit     | Standard     |
| Vicat Softening Temp, Rate B/50              | 151       | °C       | ASTM D 1525  |
| HDT, 0.45 MPa, 6.4 mm, unannealed            | 137       | °C       | ASTM D 648   |
| HDT, 1.82 MPa, 6.4 mm, unannealed            | 132       | °C       | ASTM D 648   |
| Thermal Conductivity                         | 0.19      | W/m-°C   | ASTM C 177   |
| Relative Temp Index, Elec                    | 130       | °C       | UL 746B      |
| Relative Temp Index, Mech w/impact           | 120       | °C       | UL 746B      |
| Relative Temp Index, Mech w/o impact         | 130       | °C       | UL 746B      |
| PHYSICAL                                     | Value     | Unit     | Standard     |
| Specific Gravity                             | 1.21      | -        | ASTM D 792   |
| Water Absorption, 24 hours                   | 0.15      | %        | ASTM D 570   |
| Water Absorption, equilibrium, 23C           | 0.35      | %        | ASTM D 570   |
| Mold Shrinkage, flow, 3.2 mm                 | 0.5 - 0.7 | %        | SABIC Method |
| Melt Flow Rate, 300°C/1.2 kgf                | 10        | g/10 min | ASTM D 1238  |
| ELECTRICAL                                   | Value     | Unit     | Standard     |
| Arc Resistance, Tungsten {PLC}               | 7         | PLC Code | ASTM D 495   |
| Hot Wire Ignition {PLC}                      | 2         | PLC Code | UL 746A      |
| High Voltage Arc Track Rate {PLC}            | 3         | PLC Code | UL 746A      |
| High Ampere Arc Ign, surface {PLC}           | 3         | PLC Code | UL 746A      |
| Comparative Tracking Index (UL) {PLC}        | 2         | PLC Code | UL 746A      |
| FLAME CHARACTERISTICS                        | Value     | Unit     | Standard     |
| UL Recognized, 94V-0 Flame Class Rating (3)  | 1.11      | mm       | UL 94        |
| Radiant Panel Listing                        | YES       | -        | UL Tested    |
| UV-light, water exposure/immersion           | F1        | -        | UL 746C      |

Source GMD, last updated:01/04/2000

### Processing

| Parameter                | Value | Unit |
|--------------------------|-------|------|
| <b>Injection Molding</b> |       |      |
| Drying Temperature       | 120   | °C   |

|                             |               |     |
|-----------------------------|---------------|-----|
| Drying Time                 | 3 - 4         | hrs |
| Drying Time (Cumulative)    | 48            | hrs |
| Maximum Moisture Content    | 0.02          | %   |
| Melt Temperature            | 295 - 315     | °C  |
| Nozzle Temperature          | 290 - 310     | °C  |
| Front - Zone 3 Temperature  | 295 - 315     | °C  |
| Middle - Zone 2 Temperature | 280 - 305     | °C  |
| Rear - Zone 1 Temperature   | 270 - 295     | °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  |

Source GMD, last updated:01/04/2000

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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