

# LEXAN™ VISUALFX™ RESIN FXD171R

REGION ASIA

## DESCRIPTION

Transparent/translucent PC for light diffusion special effects. MFR of 25.0.

## TYPICAL PROPERTY VALUES

Revision 20240117

| PROPERTIES  | TYPICAL VALUES                 | UNITS    | TEST METHODS |
|---|--------------------------------|----------|--------------|
| <b>MECHANICAL <sup>(1)</sup></b>                    |                                |          |              |
| Tensile Stress, yld, Type I, 50 mm/min              | 62                             | MPa      | ASTM D638    |
| Tensile Stress, brk, Type I, 50 mm/min              | 64                             | MPa      | ASTM D638    |
| Tensile Strain, yld, Type I, 50 mm/min              | 6.2                            | %        | ASTM D638    |
| Tensile Strain, brk, Type I, 50 mm/min              | 125                            | %        | ASTM D638    |
| Tensile Modulus, 50 mm/min                          | 2330                           | MPa      | 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    |
| <b>IMPACT <sup>(1)</sup></b>                        |                                |          |              |
| Izod Impact, notched, 23°C                          | 779                            | J/m      | ASTM D256    |
| Instrumented Dart Impact Total Energy, 23°C         | 70                             | J        | ASTM D3763   |
| <b>THERMAL <sup>(1)</sup></b>                       |                                |          |              |
| HDT, 0.45 MPa, 3.2 mm, unannealed                   | 137                            | °C       | ASTM D648    |
| HDT, 1.82 MPa, 3.2mm, unannealed                    | 126                            | °C       | ASTM D648    |
| Relative Temp Index, Elec <sup>(2)</sup>            | 130                            | °C       | UL 746B      |
| Relative Temp Index, Mech w/impact <sup>(2)</sup>   | 130                            | °C       | UL 746B      |
| Relative Temp Index, Mech w/o impact <sup>(2)</sup> | 130                            | °C       | UL 746B      |
| <b>PHYSICAL <sup>(1)</sup></b>                      |                                |          |              |
| Specific Gravity                                    | 1.19                           | -        | ASTM D792    |
| Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>         | 0.5 – 0.7                      | %        | SABIC method |
| Melt Flow Rate, 300°C/1.2 kgf                       | 25                             | g/10 min | ASTM D1238   |
| <b>ELECTRICAL <sup>(1)</sup></b>                    |                                |          |              |
| Comparative Tracking Index (UL) {PLC}               | 2                              | PLC Code | UL 746A      |
| Hot-Wire Ignition (HWI), PLC 2                      | ≥1.5                           | mm       | UL 746A      |
| Hot-Wire Ignition (HWI), PLC 3                      | ≥1.1                           | mm       | UL 746A      |
| High Amp Arc Ignition (HAI), PLC 0                  | ≥1.5                           | mm       | UL 746A      |
| High Amp Arc Ignition (HAI), PLC 1                  | ≥3                             | mm       | UL 746A      |
| High Amp Arc Ignition (HAI), PLC 2                  | ≥1.1                           | mm       | UL 746A      |
| High Voltage Arc Track Rate {PLC}                   | 2                              | PLC Code | UL 746A      |
| <b>FLAME CHARACTERISTICS <sup>(2)</sup></b>         |                                |          |              |
| UL Yellow Card Link                                 | <a href="#">E207780-228421</a> | -        | -            |
| UL Recognized, 94V-2 Flame Class Rating             | ≥1.1                           | mm       | UL 94        |
| <b>INJECTION MOLDING <sup>(4)</sup></b>             |                                |          |              |
| Drying Temperature                                  | 120                            | °C       |              |
| Drying Time   | 3 – 4                          | Hrs      |              |

| PROPERTIES                  | TYPICAL VALUES | UNITS | TEST METHODS |
|-----------------------------|----------------|-------|--------------|
| Drying Time (Cumulative)    | 48             | Hrs   |              |
| Maximum Moisture Content    | 0.02           | %     |              |
| Melt Temperature            | 270 – 295      | °C    |              |
| Nozzle Temperature          | 265 – 290      | °C    |              |
| Front - Zone 3 Temperature  | 270 – 295      | °C    |              |
| Middle - Zone 2 Temperature | 260 – 280      | °C    |              |
| Rear - Zone 1 Temperature   | 250 – 270      | °C    |              |
| Mold Temperature            | 70 – 120       | °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    |              |

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article. The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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