

# LEXAN™ VISUALFX™ RESIN FXEMPX2

REGION ASIA

## DESCRIPTION

LEXAN FXEMPX2 polycarbonate (PC) siloxane copolymer resin is a injection molding (IM) grade with release properties. This resin offers good low temperature ductility in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard IM PC resins. LEXAN FXEMPX2 resin is a general purpose product available for wide range of colors and may be an excellent candidate for a broad range of applications.

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES  | TYPICAL VALUES                    | UNITS                   | TEST METHODS   |
|---|-----------------------------------|-------------------------|----------------|
| <b>MECHANICAL <sup>(1)</sup></b>                    |                                   |                         |                |
| Tensile Stress, yld, Type I, 50 mm/min              | 57                                | MPa                     | ASTM D638      |
| Tensile Stress, brk, Type I, 50 mm/min              | 56                                | MPa                     | ASTM D638      |
| Tensile Strain, yld, Type I, 50 mm/min              | 4.8                               | %                       | ASTM D638      |
| Tensile Strain, brk, Type I, 50 mm/min              | 90                                | %                       | ASTM D638      |
| Tensile Modulus, 50 mm/min                          | 2100                              | MPa                     | ASTM D638      |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span        | 86                                | MPa                     | ASTM D790      |
| Flexural Modulus, 1.3 mm/min, 50 mm span            | 2100                              | MPa                     | ASTM D790      |
| <b>IMPACT <sup>(1)</sup></b>                        |                                   |                         |                |
| Izod Impact, notched, 23°C                          | 810                               | J/m                     | ASTM D256      |
| Izod Impact, notched, -30°C                         | 650                               | J/m                     | ASTM D256      |
| <b>THERMAL <sup>(1)</sup></b>                       |                                   |                         |                |
| HDT, 1.82 MPa, 3.2mm, unannealed                    | 116                               | °C                      | ASTM D648      |
| Ball Pressure Test, 125°C +/- 2°C                   | pass                              | -                       | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/120                    | 138                               | °C                      | ISO 306        |
| Relative Temp Index, Elec <sup>(2)</sup>            | 80                                | °C                      | UL 746B        |
| Relative Temp Index, Mech w/impact <sup>(2)</sup>   | 80                                | °C                      | UL 746B        |
| Relative Temp Index, Mech w/o impact <sup>(2)</sup> | 80                                | °C                      | UL 746B        |
| <b>PHYSICAL <sup>(1)</sup></b>                      |                                   |                         |                |
| Specific Gravity                                    | 1.18                              | -                       | ASTM D792      |
| Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>         | 0.4 – 0.8                         | %                       | SABIC method   |
| Mold Shrinkage, xflow, 3.2 mm <sup>(3)</sup>        | 0.4 – 0.8                         | %                       | SABIC method   |
| Melt Flow Rate, 300°C/1.2 kgf                       | 14                                | g/10 min                | ASTM D1238     |
| Density   | 1.19                              | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/saturated)                  | 0.12                              | %                       | ISO 62-1       |
| Moisture Absorption (23°C / 50% RH)                 | 0.09                              | %                       | ISO 62         |
| Melt Volume Rate, MVR at 300°C/1.2 kg               | 13                                | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>FLAME CHARACTERISTICS <sup>(2)</sup></b>         |                                   |                         |                |
| UL Yellow Card Link                                 | <a href="#">E207780-102217430</a> | -                       | -              |
| UL Recognized, 94HB Flame Class Rating              | 0.5                               | 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            | 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    |              |

- (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.

## 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.