

**Product Texts**

LEXAN EXL4419 polycarbonate (PC) siloxane copolymer resin is a 9% Glass Fiber (GF) reinforced opaque injection molding (IM) grade. This medium flow resin offers much higher ductility, improved release characteristics and excellent processability with opportunities for shorter IM cycle times when compared to GF reinforced standard PC resins. LEXAN EXL4419 resin is available in opaque colors only and is an excellent candidate for a broad range of applications that require a combination of stiffness and ductility.

| Processing/Physical Characteristics | Value | Unit                   | Test Standard |
|-------------------------------------|-------|------------------------|---------------|
| <b>ISO Data</b>                     |       |                        |               |
| Melt volume-flow rate, MVR          | 10    | cm <sup>3</sup> /10min | ISO 1133      |
| Temperature                         | 300   | °C                     | -             |
| Load                                | 1.2   | kg                     | -             |
| <b>ASTM Data</b>                    |       |                        |               |
| Melt Flow Index, MFI                | 11    | g/10min                | ASTM D 1238   |
| Temperature                         | 300   | °C                     | -             |
| Load                                | 1.2   | kg                     | -             |

| Mechanical properties                      | Value | Unit              | Test Standard |
|--------------------------------------------|-------|-------------------|---------------|
| <b>ISO Data</b>                            |       |                   |               |
| Tensile Modulus                            | 3300  | MPa               | ISO 527       |
| Yield stress                               | 55    | MPa               | ISO 527       |
| Yield strain                               | 4.5   | %                 | ISO 527       |
| Stress at break                            | 43    | MPa               | ISO 527       |
| Strain at break                            | 12.5  | %                 | ISO 527       |
| Flexural modulus                           | 3300  | MPa               | ISO 178       |
| Charpy impact strength, +23°C, 3mm         | N     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Charpy impact strength, -30°C, 3mm         | N     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Charpy notched impact strength, +23°C, 3mm | 25    | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Charpy notched impact strength, -30°C, 3mm | 15    | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Izod impact strength, +23°C                | N     | kJ/m <sup>2</sup> | ISO 180/1U    |
| Izod notched impact strength, +23°C, 3mm   | 25    | kJ/m <sup>2</sup> | ISO 180/1A    |
| Izod notched impact strength, -30°C, 3mm   | 10    | kJ/m <sup>2</sup> | ISO 180/1A    |
| <b>ASTM Data</b>                           |       |                   |               |
| Tensile Modulus                            | 3300  | MPa               | ASTM D 638    |
| Tensile Strength at Yield                  | 53    | MPa               | ASTM D 638    |
| Tensile Strength at Break                  | 44    | MPa               | ASTM D 638    |
| Elongation at Yield                        | 4.5   | %                 | ASTM D 638    |
| Elongation at Break                        | 20    | %                 | ASTM D 638    |
| Flexural Modulus                           | 3200  | MPa               | ASTM D 790    |
| Izod Impact notched, 1/8 in                | 280   | J/m               | ASTM D 256    |
| Izod Impact notched, Low-Temperature       | 110   | J/m               | ASTM D 256    |
| Temperature                                | -30   | °C                | -             |

| Thermal properties                       | Value | Unit | Test Standard |
|------------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                          |       |      |               |
| Temp. of deflection under load, 1.80 MPa | 134   | °C   | ISO 75-1/-2   |
| Vicat softening temperature, B           | 144   | °C   | ISO 306       |
| Vicat softening temperature, 120°C/h 50N | 146   | °C   | ISO 306       |
| <b>ASTM Data</b>                         |       |      |               |
| DTUL @ 264 psi                           | 135   | °C   | ASTM D 648    |
| Vicat Temperature                        | 145   | °C   | ASTM D 1525   |

| Electrical properties           | Value  | Unit   | Test Standard |
|---------------------------------|--------|--------|---------------|
| <b>ASTM Data</b>                |        |        |               |
| Dielectric Strength, Short Time | 31.5   | kV/mm  | ASTM D 149    |
| Dissipation Factor, 1 MHz       | 0.0086 | -      | ASTM D 150    |
| Dielectric Constant, 1 MHz      | 3.04   | -      | ASTM D 150    |
| Surface Resistivity             | >1E15  | Ohm    | ASTM D 257    |
| Volume Resistivity              | >1E15  | Ohm*cm | ASTM D 257    |

**LEXAN™ Copolymer EXL4419 - Americas**

PC-GF9

Saudi Basic Industries Corporation (SABIC)

| <b>Other properties</b> | <b>Value</b> | <b>Unit</b>       | <b>Test Standard</b> |
|-------------------------|--------------|-------------------|----------------------|
| Water absorption        | <b>0.12</b>  | %                 | Sim. to ISO 62       |
| Humidity absorption     | <b>0.46</b>  | %                 | Sim. to ISO 62       |
| Density                 | <b>1250</b>  | kg/m <sup>3</sup> | ISO 1183             |
| Density                 | <b>1250</b>  | kg/m <sup>3</sup> | ASTM D 792           |

| <b>Processing Recommendation Injection Molding</b> | <b>Value</b>     | <b>Unit</b> | <b>Test Standard</b> |
|----------------------------------------------------|------------------|-------------|----------------------|
| Pre-drying - Temperature                           | <b>120</b>       | °C          | -                    |
| Pre-drying - Time                                  | <b>3 - 4</b>     | h           | -                    |
| Processing humidity                                | <b>≤0.02</b>     | %           | -                    |
| Melt temperature                                   | <b>310 - 330</b> | °C          | -                    |
| Mold temperature                                   | <b>80 - 115</b>  | °C          | -                    |
| Zone 1                                             | <b>290 - 310</b> | °C          | -                    |
| Zone 2                                             | <b>300 - 320</b> | °C          | -                    |
| Zone 3                                             | <b>310 - 330</b> | °C          | -                    |
| Screw speed                                        | <b>40 - 70</b>   | rpm         | -                    |
| Back pressure                                      | <b>0.3 - 0.7</b> | MPa         | -                    |

**Characteristics****Processing**

Injection Molding

**Regional Availability**

North America