

# LEXAN™ EXL9132 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

Opaque PC-Siloxane copolymer with excellent processability. Improved flow, low temperature ductility, UV stabilized. Non-chlorinated, non-brominated flame retardant product. UL rated V0/5VA.

| General Information                        |                   |                        |                 |
|--------------------------------------------|-------------------|------------------------|-----------------|
| Additive                                   | Flame retardancy  |                        |                 |
| Features                                   | Chlorine Free     |                        |                 |
|                                            | Copolymer         |                        |                 |
|                                            | Workability, good |                        |                 |
|                                            | Good liquidity    |                        |                 |
|                                            | Bromine-free      |                        |                 |
|                                            | Flame retardancy  |                        |                 |
| Appearance                                 | Opacity           |                        |                 |
| Processing Method                          | Injection molding |                        |                 |
| Physical                                   | Nominal Value     | Unit                   | Test Method     |
| Specific Gravity                           |                   |                        |                 |
| --                                         | 1.18              | g/cm <sup>3</sup>      | ASTM D792       |
| --                                         | 1.19              | g/cm <sup>3</sup>      | ISO 1183        |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)   | 17                | g/10 min               | ASTM D1238      |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg) | 16.0              | cm <sup>3</sup> /10min | ISO 1133        |
| Molding Shrinkage                          |                   |                        | Internal method |
| Flow: 3.20mm                               | 0.40 - 0.80       | %                      | Internal method |
| Transverse flow: 3.20mm                    | 0.40 - 0.80       | %                      | Internal method |
| Water Absorption                           |                   |                        | ISO 62          |
| Saturated, 23°C                            | 0.35              | %                      | ISO 62          |
| Equilibrium, 23°C, 50% RH                  | 0.15              | %                      | ISO 62          |
| Hardness                                   | Nominal Value     | Unit                   | Test Method     |
| Ball Indentation Hardness (H 358/30)       | 95.0              | MPa                    | ISO 2039-1      |
| Mechanical                                 | Nominal Value     | Unit                   | Test Method     |
| Tensile Modulus                            |                   |                        |                 |
| -- <sup>1</sup>                            | 2270              | MPa                    | ASTM D638       |
| --                                         | 2200              | MPa                    | ISO 527-2/1     |
| Tensile Strength                           |                   |                        |                 |
| Yield <sup>2</sup>                         | 58.1              | MPa                    | ASTM D638       |
| Yield                                      | 59.0              | MPa                    | ISO 527-2/50    |
| Fracture <sup>3</sup>                      | 58.5              | MPa                    | ASTM D638       |

|                                                 |               |                   |                                                     |
|-------------------------------------------------|---------------|-------------------|-----------------------------------------------------|
| Fracture                                        | 55.0          | MPa               | ISO 527-2/50                                        |
| Tensile Elongation                              |               |                   |                                                     |
| Yield <sup>4</sup>                              | 5.8           | %                 | ASTM D638                                           |
| Yield                                           | 5.0           | %                 | ISO 527-2/50                                        |
| Fracture <sup>5</sup>                           | 100           | %                 | ASTM D638                                           |
| Fracture                                        | 100           | %                 | ISO 527-2/50                                        |
| Flexural Modulus                                |               |                   |                                                     |
| 50.0mm span <sup>6</sup>                        | 2340          | MPa               | ASTM D790                                           |
| -- <sup>7</sup>                                 | 2300          | MPa               | ISO 178                                             |
| Flexural Stress                                 |               |                   |                                                     |
| --                                              | 88.0          | MPa               | ISO 178                                             |
| Yield, 50.0mm span <sup>8</sup>                 | 95.1          | MPa               | ASTM D790                                           |
| Impact                                          | Nominal Value | Unit              | Test Method                                         |
| Charpy Notched Impact Strength <sup>9</sup>     |               |                   | ISO 179/1eA                                         |
| -30°C                                           | 25            | kJ/m <sup>2</sup> | ISO 179/1eA                                         |
| 23°C                                            | 60            | kJ/m <sup>2</sup> | ISO 179/1eA                                         |
| Charpy Unnotched Impact Strength <sup>10</sup>  |               |                   | ISO 179/1eU                                         |
| -30°C                                           | No Break      |                   | ISO 179/1eU                                         |
| 23°C                                            | No Break      |                   | ISO 179/1eU                                         |
| Notched Izod Impact                             |               |                   |                                                     |
| -30°C                                           | 560           | J/m               | ASTM D256                                           |
| 23°C                                            | 730           | J/m               | ASTM D256                                           |
| -30°C <sup>11</sup>                             | 20            | kJ/m <sup>2</sup> | ISO 180/1A                                          |
| 23°C <sup>12</sup>                              | 55            | kJ/m <sup>2</sup> | ISO 180/1A                                          |
| Unnotched Izod Impact Strength <sup>13</sup>    |               |                   | ISO 180/1U                                          |
| -30°C                                           | No Break      |                   | ISO 180/1U                                          |
| 23°C                                            | No Break      |                   | ISO 180/1U                                          |
| Instrumented Dart Impact (23°C, Total Energy)   | 67.9          | J                 | ASTM D3763                                          |
| Thermal                                         | Nominal Value | Unit              | Test Method                                         |
| Deflection Temperature Under Load               |               |                   |                                                     |
| 0.45 MPa, unannealed, 3.20mm                    | 136           | °C                | ASTM D648                                           |
| 0.45 MPa, unannealed, 100 mm span <sup>14</sup> | 136           | °C                | ISO 75-2/Be                                         |
| 1.8 MPa, unannealed, 3.20mm                     | 124           | °C                | ASTM D648                                           |
| 1.8 MPa, unannealed, 100 mm span <sup>15</sup>  | 124           | °C                | ISO 75-2/Ae                                         |
| Vicat Softening Temperature                     |               |                   |                                                     |
| --                                              | 143           | °C                | ASTM D1525, ISO 306/B50 <sup>11</sup> <sup>16</sup> |
| --                                              | 144           | °C                | ISO 306/B120                                        |
| Ball Pressure Test (125°C)                      | Pass          |                   | IEC 60695-10-2                                      |
| Linear thermal expansion coefficient            |               |                   |                                                     |
| Flow: -40 to 40°C                               | 7.2E-5        | cm/cm/°C          | ASTM E831                                           |
| Flow: 23 to 80°C                                | 7.5E-5        | cm/cm/°C          | ISO 11359-2                                         |

|                                          |                      |             |                    |
|------------------------------------------|----------------------|-------------|--------------------|
| Lateral: -40 to 40°C                     | 7.2E-5               | cm/cm/°C    | ASTM E831          |
| Lateral: 23 to 80°C                      | 7.5E-5               | cm/cm/°C    | ISO 11359-2        |
| RTI Elec                                 | 130                  | °C          | UL 746             |
| RTI Imp                                  | 50.0                 | °C          | UL 746             |
| RTI                                      | 50.0                 | °C          | UL 746             |
| <b>Electrical</b>                        | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Dielectric Strength (3.20 mm, in Oil)    | 19                   | kV/mm       | IEC 60243-1        |
| Relative Permittivity                    |                      |             | IEC 60250          |
| 50 Hz                                    | 2.70                 |             | IEC 60250          |
| 60 Hz                                    | 2.70                 |             | IEC 60250          |
| 1 MHz                                    | 2.70                 |             | IEC 60250          |
| Dissipation Factor                       |                      |             | IEC 60250          |
| 50 Hz                                    | 4.0E-4               |             | IEC 60250          |
| 60 Hz                                    | 4.0E-4               |             | IEC 60250          |
| 1 MHz                                    | 0.010                |             | IEC 60250          |
| Comparative Tracking Index               | 175                  | V           | IEC 60112          |
| <b>Flammability</b>                      | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Flame Rating                             |                      |             | UL 94              |
| 1.50 mm                                  | V-0                  |             | UL 94              |
| 3.00 mm                                  | 5VA                  |             | UL 94              |
| Glow Wire Flammability Index (1.00 mm)   | 960                  | °C          | IEC 60695-2-12     |
| Glow Wire Ignition Temperature (1.00 mm) | 825                  | °C          | IEC 60695-2-13     |
| Oxygen Index                             | 40                   | %           | ISO 4589-2         |
| <b>Injection</b>                         | <b>Nominal Value</b> | <b>Unit</b> |                    |
| Drying Temperature                       | 121                  | °C          |                    |
| Drying Time                              | 3.0 - 4.0            | hr          |                    |
| Drying Time, Maximum                     | 48                   | hr          |                    |
| Suggested Max Moisture                   | 0.020                | %           |                    |
| Suggested Shot Size                      | 40 - 60              | %           |                    |
| Rear Temperature                         | 217 - 293            | °C          |                    |
| Middle Temperature                       | 282 - 304            | °C          |                    |
| Front Temperature                        | 293 - 316            | °C          |                    |
| Nozzle Temperature                       | 288 - 310            | °C          |                    |
| Processing (Melt) Temp                   | 293 - 316            | °C          |                    |
| Mold Temperature                         | 71.0 - 93.0          | °C          |                    |
| Back Pressure                            | 0.345 - 0.689        | MPa         |                    |
| Screw Speed                              | 40 - 70              | rpm         |                    |
| Vent Depth                               | 0.025 - 0.076        | mm          |                    |
| <b>NOTE</b>                              |                      |             |                    |
| 1.                                       | 50 mm/min            |             |                    |
| 2.                                       | Type 1, 50mm/min     |             |                    |
| 3.                                       | Type 1, 50mm/min     |             |                    |

|     |                           |
|-----|---------------------------|
| 4.  | Type 1, 50mm/min          |
| 5.  | Type 1, 50mm/min          |
| 6.  | 1.3 mm/min                |
| 7.  | 2.0 mm/min                |
| 8.  | 1.3 mm/min                |
| 9.  | 80*10*3 sp=62mm           |
| 10. | 80*10*3 sp=62mm           |
| 11. | 80*10*3                   |
| 12. | 80*10*3                   |
| 13. | 80*10*3                   |
| 14. | 120*10*4 mm               |
| 15. | 120*10*4 mm               |
| 16. | 标准 B (120°C/h), 载荷2 (50N) |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT