



## LEXAN\* Resin SLX9271T

### Asia Pacific: COMMERCIAL

LEXAN SLX9271T resin is a halogen-free flame retardant polycarbonate copolymer resin with UL-94 V0 rating at 3.0 mm, enhanced UV stabilization and added release agent for injection molding applications. The resin is available in transparent and limited opaque colors.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | UNIT              | STANDARD    |
|--|---------------|-------------------|-------------|
| <b>MECHANICAL</b>                            |               |                   |             |
| Tensile Stress, yld, Type I, 50 mm/min       | 65            | MPa               | ASTM D 638  |
| Tensile Stress, brk, Type I, 50 mm/min       | 67            | MPa               | ASTM D 638  |
| Tensile Strain, yld, Type I, 50 mm/min       | 6             | %                 | ASTM D 638  |
| Tensile Strain, brk, Type I, 50 mm/min       | > 100         | %                 | ASTM D 638  |
| Tensile Modulus, 5 mm/min                    | 2400          | MPa               | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 96            | MPa               | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 2450          | MPa               | ASTM D 790  |
| Tensile Stress, yield, 50 mm/min             | 67            | MPa               | ISO 527     |
| Tensile Stress, break, 50 mm/min             | 70            | MPa               | ISO 527     |
| Tensile Strain, yield, 50 mm/min             | 6             | %                 | ISO 527     |
| Tensile Strain, break, 50 mm/min             | > 100         | %                 | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 2300          | MPa               | ISO 527     |
| Flexural Stress, yield, 2 mm/min             | 96            | MPa               | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 2450          | MPa               | ISO 178     |
| <b>IMPACT</b>                                |               |                   |             |
| Izod Impact, notched, 23°C                   | 780           | J/m               | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 130           | J/m               | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 80            | J                 | ASTM D 3763 |
| Izod Impact, unnotched 80*10*3 +23°C         | NB            | kJ/m <sup>2</sup> | ISO 180/1U  |
| Izod Impact, notched 80*10*3 +23°C           | 65            | kJ/m <sup>2</sup> | ISO 180/1A  |
| Izod Impact, notched 80*10*3 -30°C           | 10            | kJ/m <sup>2</sup> | ISO 180/1A  |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm   | 65            | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm  | 15            | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm   | NB            | kJ/m <sup>2</sup> | ISO 179/1eU |
| <b>THERMAL</b>                               |               |                   |             |
| Vicat Softening Temp, Rate B/50              | 139           | °C                | ASTM D 1525 |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 124           | °C                | ASTM D 648  |

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. 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) Own measurement according to UL.  
 5) 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.  
 6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source, GMD, Last Update: 09/18/2015

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| TYPICAL PROPERTIES <sup>1</sup>               | TYPICAL VALUE    | UNIT                    | STANDARD            |
|---|------------------|-------------------------|---------------------|
| <b>THERMAL</b>                                |                  |                         |                     |
| CTE, -40°C to 40°C, flow                      | 7.E-05           | 1/°C                    | ASTM E 831          |
| CTE, -40°C to 40°C, xflow                     | 7.E-05           | 1/°C                    | ASTM E 831          |
| CTE, -40°C to 40°C, flow                      | 7.E-05           | 1/°C                    | ISO 11359-2         |
| CTE, -40°C to 40°C, xflow                     | 7.E-05           | 1/°C                    | ISO 11359-2         |
| Ball Pressure Test, 125°C +/- 2°C             | passes           | -                       | IEC 60695-10-2      |
| Vicat Softening Temp, Rate B/50               | 139              | °C                      | ISO 306             |
| Vicat Softening Temp, Rate B/120              | 140              | °C                      | ISO 306             |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm         | 124              | °C                      | ISO 75/Af           |
| Relative Temp Index, Elec                     | 80               | °C                      | UL 746B             |
| Relative Temp Index, Mech w/impact            | 80               | °C                      | UL 746B             |
| Relative Temp Index, Mech w/o impact          | 80               | °C                      | UL 746B             |
| <b>PHYSICAL</b>                               |                  |                         |                     |
| Specific Gravity                              | 1.2              | -                       | ASTM D 792          |
| <b>Mold Shrinkage, flow, 3.2 mm (5)</b>       | <b>0.5 - 0.7</b> | <b>%</b>                | <b>SABIC Method</b> |
| Melt Flow Rate, 300°C/1.2 kgf                 | 17.5             | g/10 min                | ASTM D 1238         |
| Density                                       | 1.2              | g/cm <sup>3</sup>       | ISO 1183            |
| Water Absorption, (23°C/sat)                  | 0.35             | %                       | ISO 62              |
| Moisture Absorption (23°C / 50% RH)           | 0.15             | %                       | ISO 62              |
| Melt Volume Rate, MVR at 300°C/1.2 kg         | 16               | cm <sup>3</sup> /10 min | ISO 1133            |
| <b>FLAME CHARACTERISTICS</b>                  |                  |                         |                     |
| UL Recognized, 94V-0 Flame Class Rating (3)   | 3                | mm                      | UL 94               |
| Glow Wire Flammability Index 960°C, passes at | 1                | mm                      | IEC 60695-2-12      |
| Glow Wire Ignitability Temperature, 1.0 mm    | 875              | °C                      | IEC 60695-2-13      |
| Glow Wire Ignitability Temperature, 1.5 mm    | 850              | °C                      | IEC 60695-2-13      |

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|--|---------------|------|----------------|
| <b>FLAME CHARACTERISTICS</b>               |               |      |                |
| Glow Wire Ignitability Temperature, 3.0 mm | 850           | °C   | IEC 60695-2-13 |

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| PROCESSING PARAMETERS       | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 120           | °C   |
| Drying Time                 | 2 - 4         | hrs  |
| Maximum Moisture Content    | 0.02          | %    |
| Melt Temperature            | 280 - 310     | °C   |
| Nozzle Temperature          | 270 - 290     | °C   |
| Front - Zone 3 Temperature  | 280 - 310     | °C   |
| Middle - Zone 2 Temperature | 270 - 290     | °C   |
| Rear - Zone 1 Temperature   | 260 - 280     | °C   |
| Hopper Temperature          | 60 - 80       | °C   |
| Mold Temperature            | 80 - 110      | °C   |

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