

LNPTM ELCRESTM SLX2291T

DESCRIPTION

LNP ELCRES SLX2291T is based on Polycarbonate (PC) copolymer resin. It is an injection moldable, weatherable product that offers enhanced UV stabilization. This high flow (25 MFR) resin provides good processability with added mold release. Targeted for potential paint elimination through a wide range of high gloss opaque colors. Also available in transparent or tints. SLX2291T is targeted for broad range of automotive, building and construction, electrical, consumer and electronics applications.

| GENERAL INFORMATION | |
|-----------------------|---|
| Features | High Flow, Colorable, IR Transparent, Transparent/Translucent, Dimensional stability, Weatherable/UV stable, High gloss, Piano black, No PFAS intentionally added |
| Fillers | Unreinforced |
| Polymer Types | Polycarbonate (PC) |
| Processing Techniques | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|----------------------------|--|
| Automotive | Automotive EV Batteries, Heavy Truck, Automotive Interiors, Automotive Exteriors, Recreational /Specialty Vehicles |
| Building and Construction | Building Component |
| Consumer | Personal Recreation |
| Electrical and Electronics | Mobile Phone - Computer - Tablets, Lighting |
| Industrial | Electrical |

TYPICAL PROPERTY VALUES

Revision 20241219

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------|--------------|
| MECHANICAL ⁽¹⁾ | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 63 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 65 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 6 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | >100 | % | ASTM D638 |
| Tensile Modulus, 50 mm/min | 2315 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 105 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2400 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 64 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 61 | 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 | 2350 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 98 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2410 | MPa | ISO 178 |
| IMPACT ^{(1) (2)} | | | |
| Izod Impact, notched, 23°C | 350 | J/m | ASTM D256 |
| Izod Impact, notched, 23°C, 2mm | 665 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 107 | J/m | ASTM D256 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------------|--------------|
| Instrumented Dart Impact Total Energy, 23°C ⁽³⁾ | 71 | J | ASTM D3763 |
| Izod Impact, unnotched 80*10*3 +23°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80*10*3 +23°C | 56 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 12 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 +23°C | 12 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 65 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 10 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 12 | kJ/m ² | ISO 179/1eA |
| THERMAL ⁽¹⁾ | | | |
| Vicat Softening Temp, Rate B/50 | 138 | °C | ASTM D1525 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 123 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 7.E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 7.E-05 | 1/°C | ASTM E831 |
| 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 |
| Vicat Softening Temp, Rate B/50 | 138 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 120 | °C | ISO 75/Af |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 133 | °C | ISO 75/Bf |
| PHYSICAL ⁽¹⁾ | | | |
| Density | 1.2 | g/cm ³ | ISO 1183 |
| Specific Gravity | 1.2 | - | ASTM D792 |
| Melt Flow Rate, 300°C/1.2 kgf | 25 | g/10 min | ASTM D1238 |
| Water Absorption, (23°C/24hrs) | 0.13 | % | ASTM D570 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.06 | % | ASTM D570 |
| Mold Shrinkage, flow, 3.2 mm ⁽⁴⁾ | 0.5 – 0.8 | % | SABIC method |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 23 | cm ³ /10 min | ISO 1133 |
| INJECTION MOLDING ⁽⁵⁾ | | | |
| 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 | |

(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) Impact property of this grade is strongly dependent on the thickness and molding condition. This grade shows enhanced ductility at lower thicknesses (below 3 mm).

(3) at 3.3 m/s dart speed

(4) 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.

(5) 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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