# LNP™ ELCRES™ SLX1271D

## DESCRIPTION

LNP ELCRES SLX1271D is a low viscosity, weatherable polycarbonate copolymer blend with enhanced UV stabilization available in diffusive colors. It offers the potential for selective plating on PC/ABS in intricate geometries via a 2K molding process. The material is an ideal material for automotive exterior applications.

| GENERAL INFORMATION | |
|---|---|
| **Features** | High Flow, Weatherable/UV stable, No PFAS intentionally added |
| **Fillers** | Unreinforced |
| **Polymer Types** | Polycarbonate (PC) |
| **Processing Techniques** | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Automotive | Automotive Exteriors |
| Electrical and Electronics | Lighting |

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Modulus, 1 mm/min** | 2256 | MPa | ISO 527 |
| **Tensile Stress, yield, 50 mm/min** | 66 | MPa | ISO 527 |
| **Tensile Stress, break, 50 mm/min** | 68 | MPa | ISO 527 |
| **Tensile Strain, yield, 50 mm/min** | 6.2 | % | ISO 527 |
| **Tensile Strain, break, 50 mm/min** | 115 | % | ISO 527 |
| **Flexural Modulus, 2 mm/min** | 2255 | MPa | ISO 178 |
| **Flexural Strength, 2 mm/min** | 97 | MPa | ISO 178 |
| **Tensile Modulus, 5 mm/min** | 2292 | MPa | ASTM D638 |
| **Tensile Stress, yld, Type I, 50 mm/min** | 65 | MPa | ASTM D638 |
| **Tensile Stress, brk, Type I, 50 mm/min** | 62 | MPa | ASTM D638 |
| **Tensile Strain, yld, Type I, 50 mm/min** | 6.3 | % | ASTM D638 |
| **Tensile Strain, brk, Type I, 50 mm/min** | 83 | % | ASTM D638 |
| **Flexural Modulus, 1.3 mm/min, 50 mm span** | 2480 | MPa | ASTM D790 |
| **Flexural Strength, 1.3 mm/min, 50 mm span** | 98 | MPa | ASTM D790 |
| IMPACT [1] | | | |
| **Izod Impact, notched 80*10*3 +23°C** | 10 | kJ/m² | ISO 180/1A |
| **Izod Impact, notched 80*10*3 0°C** | 9 | kJ/m² | ISO 180/1A |
| **Izod Impact, notched 80*10*3 -30°C** | 7 | kJ/m² | ISO 180/1A |
| **Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm** | 8 | kJ/m² | ISO 179/1eA |
| **Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm** | 7 | kJ/m² | ISO 179/1eA |
| **Multi-Axial Instrumented Impact Total Energy, 23°C** [2] | 110 | J | ISO 6603-2 |
| **Multi-Axial Instrumented Impact Total Energy, -30°C** [2] | 108 | J | ISO 6603-2 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Izod Impact, notched, 23°C | 239 | J/m | ASTM D256 |
| Izod Impact, notched, 0°C | 99 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 98 | J/m | ASTM D256 |
| Instrumented Dart Impact Total Energy, 23°C [2] | 57 | J | ASTM D3763 |
| Instrumented Dart Impact Peak Force, 23°C [2] | 5900 | N | ASTM D3763 |
| THERMAL [1] | | | |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 123 | °C | ISO 75/Af |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 134 | °C | ISO 75/Bf |
| Vicat Softening Temp, Rate B/50 | 138 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 139 | °C | ISO 306 |
| CTE, 23°C to 50°C, flow | 7.1E-05 | 1/°C | ISO 11359-2 |
| CTE, 23°C to 50°C, xflow | 7.2E-05 | 1/°C | ISO 11359-2 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 123 | °C | ASTM D648 |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 133 | °C | ASTM D648 |
| Vicat Softening Temp, Rate B/50 | 138 | °C | ASTM D1525 |
| Vicat Softening Temp, Rate B/120 | 139 | °C | ASTM D1525 |
| CTE, 23°C to 50°C, flow | 7.1E-05 | 1/°C | ASTM E831 |
| CTE, 23°C to 50°C, xflow | 7.2E-05 | 1/°C | ASTM E831 |
| PHYSICAL [1] | | | |
| Density | 1.21 | g/cm³ | ISO 1183 |
| Moisture Absorption, (23°C/50% RH/Equilibrium) | 0.15 | % | ISO 62-4 |
| Water Absorption, (23°C/saturated) | 0.32 | % | ISO 62-1 |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 16 | cm³/10 min | ASTM D1238 |
| Specific Gravity | 1.2 | - | ASTM D792 |
| Melt Flow Rate, 300°C/1.2 kgf | 18 | g/10 min | ASTM D1238 |
| Mold Shrinkage, flow [3] | 0.75 | % | SABIC method |
| INJECTION MOLDING [4] | | | |
| Drying Temperature | 120 | °C | |
| Drying Time | 2 – 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 280 – 310 | °C | |
| Rear - Zone 1 Temperature | 260 – 280 | °C | |
| Middle - Zone 2 Temperature | 270 – 290 | °C | |
| Front - Zone 3 Temperature | 280 – 310 | °C | |
| Nozzle Temperature | 270 – 290 | °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) 4.4 m/s

(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.

(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.

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