

SABIC Innovative Plastics Lexan® SLX2231T PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Low viscosity PC copolymer blend with enhanced UV stabilization and added release agent. V2 rated. Available in transparent and tinted colors

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-SLX2231T-PC-Copolymer-Asia-Pacific.php

| Physical Properties | Metric | English | Comments |
|--------------------------------|---|---|---|
| Specific Gravity | 1.20 g/cc | 1.20 g/cc | ASTM D792 |
| Density | 1.20 g/cc | 0.0434 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.150 % | 0.150 % | 23°C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 0.35 % | 0.35 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0050 - 0.0070 cm/cm @Thickness 3.20 mm | 0.0050 - 0.0070 in/in @Thickness 0.126 in | SABIC Method |
| Melt Flow | 17.5 g/10 min @Load 1.20 kg, Temperature 300 °C | 17.5 g/10 min @Load 2.65 lb, Temperature 572 °F | ASTM D1238 |
| Melt Index of Compound | 16 g/10 min @Load 1.20 kg, Temperature 300 °C | 16 g/10 min @Load 2.65 lb, Temperature 572 °F | MVR [cm ³ /10 min]; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|-----------|------------------------------|
| Tensile Strength at Break | 67.0 MPa | 9720 psi | Type I, 50 mm/min; ASTM D638 |
| | 70.0 MPa | 10200 psi | 50 mm/min; ISO 527 |
| Tensile Strength, Yield | 65.0 MPa | 9430 psi | Type I, 50 mm/min; ASTM D638 |
| | 67.0 MPa | 9720 psi | 50 mm/min; ISO 527 |
| Elongation at Break | >= 100 % | >= 100 % | Type I, 50 mm/min; ASTM D638 |
| | >= 100 % | >= 100 % | 50 mm/min; ISO 527 |
| Elongation at Yield | 6.0 % | 6.0 % | Type I, 50 mm/min; ASTM D638 |
| | 6.0 % | 6.0 % | 50 mm/min; ISO 527 |
| Tensile Modulus | 2.30 GPa | 334 ksi | 1 mm/min; ISO 527 |

| Mechanical Properties | 2.40 GPa Metric | 348 ksi English | 5 mm/min: ASTM D638 Comments |
|------------------------------|---|---|------------------------------------|
| Flexural Yield Strength | 96.0 MPa | 13900 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| | 96.0 MPa | 13900 psi | 2 mm/min; ISO 178 |
| Flexural Modulus | 2.45 GPa | 355 ksi | 1.3 mm/min, 50 mm span; ASTM D790 |
| | 2.45 GPa | 355 ksi | 2 mm/min; ISO 178 |
| Izod Impact, Notched | 7.80 J/cm | 14.6 ft-lb/in | ASTM D256 |
| | 1.30 J/cm @Temperature -30.0 °C | 2.44 ft-lb/in @Temperature -22.0 °F | ASTM D256 |
| Izod Impact, Notched (ISO) | 25.0 kJ/m ² | 11.9 ft-lb/in ² | 80*10*3; ISO 180/1A |
| | 10.0 kJ/m ² @Temperature -30.0 °C | 4.76 ft-lb/in ² @Temperature -22.0 °F | 80*10*3; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | NB | NB | 80*10*3; ISO 180/1U |
| Charpy Impact Unnotched | NB | NB | Edgew 80*10*3 sp=62mm; ISO 179/1eU |
| Charpy Impact, Notched | 3.00 J/cm ² | 14.3 ft-lb/in ² | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
| | 1.50 J/cm ² @Temperature -30.0 °C | 7.14 ft-lb/in ² @Temperature -22.0 °F | Edgew 80*10*3 sp=62mm; ISO 179/1eA |
| Dart Drop, Total Energy | 80.0 J | 59.0 ft-lb | ASTM D3763 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Thermal Properties | Metric | English | Comments |
|---------------------------------|------------------------------|-----------------------------|-------------|
| CTE, linear, Parallel to Flow | 70.0 µm/m-°C | 38.9 µin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| | 70.0 µm/m-°C | 38.9 µin/in-°F | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| CTE, linear, Transverse to Flow | 70.0 µm/m-°C | 38.9 µin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| | 70.0 µm/m-°C | 38.9 µin/in-°F | ISO 11359-2 |
| | @Temperature -40.0 - | @Temperature -40.0 - | |

| Thermal Properties | 40.0 °C Metric | 104 °F English | Comments |
|--|--------------------|----------------------|----------------------------------|
| Deflection Temperature at 1.8 MPa (264 psi) | 118 °C | 244 °F | Flatw 80*10*4 sp=64mm; ISO 75/Af |
| | 133 °C | 271 °F | unannealed; ASTM D648 |
| | @Thickness 3.20 mm | @Thickness 0.126 in | |
| Vicat Softening Point | 136 °C | 277 °F | Rate B/50; ISO 306 |
| | 137 °C | 279 °F | Rate B/120; ISO 306 |
| | 137 °C | 279 °F | Rate B/50; ASTM D1525 |
| Flammability, UL94 | V-2 | V-2 | UL 94 by SABIC-IP |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| Glow Wire Test | 825 °C | 1520 °F | IEC 60695-2-13 |
| | 825 °C | 1520 °F | IEC 60695-2-13 |
| | 825 °C | 1520 °F | IEC 60695-2-13 |
| | 825 °C | 1520 °F | IEC 60695-2-13 |
| | 960 °C | 1760 °F | IEC 60695-2-12 |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |

| Optical Properties | Metric | English | Comments |
|-----------------------|--------------------|---------------------|---------------------|
| Haze | 0.60 % | 0.60 % | ASTM D1003 |
| | @Thickness 2.54 mm | @Thickness 0.100 in | |
| Transmission, Visible | 89 % | 89 % | 2.54 mm; ASTM D1003 |

| Descriptive Properties | Value | Comments |
|-----------------------------------|--------|----------------|
| Ball Pressure Test, 125°C +/- 2°C | passes | IEC 60695-10-2 |

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