

## SABIC Innovative Plastics Lexan® SLX2531T PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Transparent weatherable PC copolymer for blowmolding/extrusion. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-SLX2531T-PC-Copolymer-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-SLX2531T-PC-Copolymer-Europe-Africa-Middle-East.php)

| Physical Properties                | Metric   | English  | Comments   |
|------------------------------------|--|--|--|
| Specific Gravity                   | 1.20 g/cc  | 1.20 g/cc  | ASTM D 792   |
| Density                            | 1.20 g/cc  | 0.0434 lb/in <sup>3</sup>                            | ISO 1183   |
| Moisture Absorption at Equilibrium | 0.15 %   | 0.15 %   | 23°C / 50% RH; ISO 62                                |
| Water Absorption at Saturation     | 0.35 %<br>@Temperature 23.0 °C                       | 0.35 %<br>@Temperature 73.4 °F                       | ISO 62   |
| Linear Mold Shrinkage, Flow        | 0.0060 - 0.0080 cm/cm<br>@Thickness 3.20 mm          | 0.0060 - 0.0080 in/in<br>@Thickness 0.126 in         | SABIC Method   |
| Melt Flow                          | 2.0 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 2.0 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | [cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133 |
|                                    | 3.0 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 3.0 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | ASTM D 1238  |

| Mechanical Properties     | Metric   | English  | Comments                      |
|---------------------------|----------|----------|-------------------------------|
| Tensile Strength at Break | 63.0 MPa | 9140 psi | 50 mm/min; ISO 527            |
|                           | 64.0 MPa | 9280 psi | Type I, 50 mm/min; ASTM D 638 |
| Tensile Strength, Yield   | 62.0 MPa | 8990 psi | Type I, 50 mm/min; ASTM D 638 |
|                           | 63.0 MPa | 9140 psi | 50 mm/min; ISO 527            |
| Elongation at Break       | 98 %     | 98 %     | 50 mm/min; ISO 527            |
|                           | 106 %    | 106 %    | Type I, 50 mm/min; ASTM D 638 |
| Elongation at Yield       | 6.0 %    | 6.0 %    | 50 mm/min; ISO 527            |
|                           | 7.5 %    | 7.5 %    | Type I, 50 mm/min; ASTM D 638 |

| Mechanical Properties        | Metric Pa              | English                    | Comments ISO 527                              |
|------------------------------|------------------------|----------------------------|---|
|                              | 2.40 GPa               | 348 ksi                    | 5 mm/min; ASTM D 638                          |
| Flexural Yield Strength      | 94.0 MPa               | 13600 psi                  | 2 mm/min; ISO 178                             |
|                              | 101 MPa                | 14600 psi                  | 1.3 mm/min, 50 mm span; ASTM D 790            |
| Flexural Modulus             | 2.24 GPa               | 325 ksi                    | 2 mm/min; ISO 178                             |
|                              | 2.40 GPa               | 348 ksi                    | 1.3 mm/min, 50 mm span; ASTM D 790            |
| Izod Impact, Notched         | 1.41 J/cm              | 2.64 ft-lb/in              | ASTM D 256                                    |
|                              | @Temperature -30.0 °C  | @Temperature -22.0 °F      |   |
|                              | 8.48 J/cm              | 15.9 ft-lb/in              | ASTM D 256                                    |
|                              | @Temperature 23.0 °C   | @Temperature 73.4 °F       |   |
| Izod Impact, Notched (ISO)   | 10.0 kJ/m <sup>2</sup> | 4.76 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1A                           |
|                              | @Temperature -30.0 °C  | @Temperature -22.0 °F      |   |
|                              | 70.0 kJ/m <sup>2</sup> | 33.3 ft-lb/in <sup>2</sup> | 80*10*3; ISO 180/1A                           |
|                              | @Temperature 23.0 °C   | @Temperature 73.4 °F       |   |
| Izod Impact, Unnotched (ISO) | NB                     | NB                         | 80*10*3; ISO 180/1U                           |
|                              | @Temperature 23.0 °C   | @Temperature 73.4 °F       |   |
| Charpy Impact Unnotched      | NB                     | NB                         | Edgew 80*10*3 sp=62mm; ISO 179/1eU            |
|                              | @Temperature 23.0 °C   | @Temperature 73.4 °F       |   |
| Charpy Impact, Notched       | 1.50 J/cm <sup>2</sup> | 7.14 ft-lb/in <sup>2</sup> | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA    |
|                              | @Temperature -30.0 °C  | @Temperature -22.0 °F      |   |
|                              | 7.50 J/cm <sup>2</sup> | 35.7 ft-lb/in <sup>2</sup> | V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA    |
|                              | @Temperature 23.0 °C   | @Temperature 73.4 °F       |   |
| Impact Test                  | 74.0 J                 | 54.6 ft-lb                 | Instrumented Impact Total Energy; ASTM D 3763 |
|                              | @Temperature 23.0 °C   | @Temperature 73.4 °F       |   |

| Thermal Properties            | Metric                       | English                     | Comments    |
|-------------------------------|------------------------------|-----------------------------|-------------|
| CTE, linear, Parallel to Flow | 60.2 µm/m-°C                 | 33.4 µin/in-°F              | ASTM E 831  |
|                               | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F |             |
|                               | 60.2 µm/m-°C                 | 33.4 µin/in-°F              | ISO 11359-2 |

| Thermal Properties                             | Metric<br>@Temperature -40.0 -<br>40.0 °C        | English<br>@Temperature -40.0 -<br>104 °F          | Comments                         |
|--|--|--|----------------------------------|
| CTE, linear, Transverse to Flow                | 63.6 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ | 35.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ | ASTM E 831                       |
|  | @Temperature -40.0 -<br>40.0 °C                  | @Temperature -40.0 -<br>104 °F                     |                                  |
|  | 63.6 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ | 35.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ | ISO 11359-2                      |
|  | @Temperature -40.0 -<br>40.0 °C                  | @Temperature -40.0 -<br>104 °F                     |                                  |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 125 °C   | 257 °F   | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|  | 126 °C   | 259 °F   |                                  |
|  | @Thickness 3.20 mm                               | @Thickness 0.126 in                                | unannealed; ASTM D 648           |
| Vicat Softening Point                          | 143 °C   | 289 °F   | Rate B/50; ASTM D 1525           |
|  | 143 °C   | 289 °F   | Rate B/50; ISO 306               |
|  | 145 °C   | 293 °F   | Rate B/120; ISO 306              |
| Flammability, UL94                             | V-2  | V-2  | UL 94 by SABIC-IP                |
|  | @Thickness 1.50 mm                               | @Thickness 0.0591 in                               |                                  |

| Optical Properties    | Metric | English | Comments                              |
|-----------------------|--------|---------|---------------------------------------|
| Transmission, Visible | 90 %   | 90 %    | transparent; thickness not quantified |

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