

SABIC Innovative Plastics Lexan® FXD9810 PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Non-chlorinated, non-brominated Flame retardant PC-siloxane copolymer blend. Excellent processability, super high flow, good impact, UL rated V-0. Limited translucent colors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXD9810-PC-Copolymer-Asia-Pacific.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|---|---|---|
| Specific Gravity | 1.19 g/cc | 1.19 g/cc | ASTM D792 |
| Density | 1.19 g/cc | 0.0430 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.0800 % | 0.0800 % | 23°C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 0.26 % | 0.26 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0040 - 0.0080 cm/cm @Thickness 3.20 mm | 0.0040 - 0.0080 in/in @Thickness 0.126 in | SABIC Method |
| Linear Mold Shrinkage, Transverse | 0.0040 - 0.0080 cm/cm @Thickness 3.20 mm | 0.0040 - 0.0080 in/in @Thickness 0.126 in | SABIC Method |
| Melt Flow | 30 g/10 min @Load 1.20 kg, Temperature 300 °C | 30 g/10 min @Load 2.65 lb, Temperature 572 °F | ASTM D1238 |
| Melt Index of Compound | 29 g/10 min @Load 1.20 kg, Temperature 300 °C | 29 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 | 49.0 MPa | 7110 psi | 50 mm/min; ISO 527 |
| | 50.0 MPa | 7250 psi | Type I, 50 mm/min; ASTM D638 |
| Tensile Strength, Yield | 55.0 MPa | 7980 psi | Type I, 50 mm/min; ASTM D638 |
| | 56.0 MPa | 8120 psi | 50 mm/min; ISO 527 |
| Elongation at Break | 95 % | 95 % | 50 mm/min; ISO 527 |
| | 100 % | 100 % | Type I, 50 mm/min; ASTM D638 |
| Elongation at Yield | 5.6 % | 5.6 % | Type I, 50 mm/min; ASTM D638 |
| | 5.6 % | 5.6 % | 50 mm/min; ISO 527 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|------------------------|----------------------------|------------------------------------|
| Tensile Modulus | 2.19 GPa | 319 ksi | 1 mm/min; ISO 527 |
| | 2.20 GPa | 319 ksi | 50 mm/min; ASTM D638 |
| Flexural Yield Strength | 91.0 MPa | 13200 psi | 2 mm/min; ISO 178 |
| | 94.0 MPa | 13600 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus | 2.10 GPa | 305 ksi | 1.3 mm/min, 50 mm span; ASTM D790 |
| | 2.25 GPa | 326 ksi | 2 mm/min; ISO 178 |
| Izod Impact, Notched | 6.90 J/cm | 12.9 ft-lb/in | ASTM D256 |
| | 2.20 J/cm | 4.12 ft-lb/in | ASTM D256 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Izod Impact, Notched (ISO) | 40.0 kJ/m ² | 19.0 ft-lb/in ² | 80*10*4; ISO 180/1A |
| | 19.0 kJ/m ² | 9.04 ft-lb/in ² | 80*10*4; ISO 180/1A |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact, Notched | 4.90 J/cm ² | 23.3 ft-lb/in ² | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| Dart Drop, Total Energy | 63.0 J | 46.5 ft-lb | ASTM D3763 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Thermal Properties | Metric | English | Comments |
|---|------------------------------|-----------------------------|-----------------------|
| CTE, linear, Parallel to Flow | 69.0 µm/m-°C | 38.3 µin/in-°F | ISO 11359-2 |
| | @Temperature 23.0 - 80.0 °C | @Temperature 73.4 - 176 °F | |
| | 70.5 µm/m-°C | 39.2 µin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| CTE, linear, Transverse to Flow | 68.0 µm/m-°C | 37.8 µin/in-°F | ISO 11359-2 |
| | @Temperature 23.0 - 80.0 °C | @Temperature 73.4 - 176 °F | |
| | 70.3 µm/m-°C | 39.1 µin/in-°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 °C | @Temperature -40.0 - 104 °F | |
| Deflection Temperature at 1.8 MPa (264 psi) | 118 °C | 244 °F | unannealed; ASTM D648 |
| | @Thickness 3.20 mm | @Thickness 0.126 in | |

| Vicat Softening Point Thermal Properties | 136 °C Metric | 277 °F English | Rate B/50: ASTM D1525 Comments |
|---|--------------------|----------------------|-----------------------------------|
| | 137 °C | 279 °F | Rate B/50; ISO 306 |
| | 138 °C | 280 °F | Rate B/120; ISO 306 |
| Flammability, UL94 | V-1 | V-1 | UL 94 |
| | @Thickness 1.00 mm | @Thickness 0.0394 in | |
| | V-0 | V-0 | UL 94 |
| | @Thickness 1.20 mm | @Thickness 0.0472 in | |
| Glow Wire Test | 875 °C | 1610 °F | IEC 60695-2-13 |
| | 960 °C | 1760 °F | IEC 60695-2-12 |
| | @Thickness 1.00 mm | @Thickness 0.0394 in | |

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

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