

SABIC Innovative Plastics Lexan® FXD1413T PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Clear PC-siloxane copolymer with excellent processability, in special light diffusion colors. Medium flow. Improved toughness compared to medium flow standard PC in same color. Color package may affect performance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXD1413T-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	0.0900 %	0.0900 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.13 %	0.13 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	on Tensile Bar; SABIC Method
	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	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	9.0 g/10 min @Load 5.00 kg, Temperature 220 °C	9.0 g/10 min @Load 11.0 lb, Temperature 428 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	58.0 MPa	8410 psi	50 mm/min; ISO 527
	66.0 MPa	9570 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	57.0 MPa	8270 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	116 %	116 %	50 mm/min; ISO 527
	130 %	130 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.6 %	5.6 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
			Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.27 GPa	329 ksi	50 mm/min; ASTM D638
	2.31 GPa	335 ksi	1 mm/min; ISO 527
Flexural Yield Strength	87.0 MPa	12600 psi	1.3 mm/min, 50 mm span; ASTM D790
	91.0 MPa	13200 psi	2 mm/min; ISO 178
Flexural Modulus	2.19 GPa	318 ksi	2 mm/min; ISO 178
	2.27 GPa	329 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	8.90 J/cm	16.7 ft-lb/in	ASTM D256
	7.95 J/cm	14.9 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	65.0 kJ/m ²	30.9 ft-lb/in ²	80*10*3; ISO 180/1A
	55.0 kJ/m ²	26.2 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	NB	NB	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	7.00 J/cm ²	33.3 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	6.00 J/cm ²	28.6 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	82.0 J	60.5 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	71.5 µm/m-°C	39.7 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	

Thermal Properties	Metric $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	English $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Comments
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	ASTM E 831
CTE, linear, Transverse to Flow	79.3 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	44.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	79.3 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	44.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
Deflection Temperature at 1.8 MPa (264 psi)	119 °C	246 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	124 °C	255 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	141 °C	286 °F	Rate A/50; ASTM D1525
	141 °C	286 °F	Rate B/50; ISO 306
	143 °C	289 °F	Rate B/120; ISO 306

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

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