SABIC Innovative Plastics Lexan® FXD1433T PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Clear PC-siloxane copolymer with excellent processability in special light diffusion colors. Medium flow, UV stabilized. Improved toughness compared to standard PC in same color. Color package may affect performance.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-FXD1433T-PC-Copolymer-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	0.090 %	0.090 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.12 % @Temperature 23.0 °C	0.12 % @Temperature 73.4 °F	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	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	58.0 MPa	8410 psi	50 mm/min; ISO 527
	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	59.0 MPa	8560 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
Elongation at Break	99 %	99 %	Type I, 50 mm/min; ASTM D 638
	114 %	114 %	50 mm/min; ISO 527
Elongation at Yield	5.6 %	5.6 %	50 mm/min; ISO 527
	5.8 %	5.8 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.32 GPa	336 ksi	50 mm/min; ASTM D 638
	2.35 GPa	341 ksi	1 mm/min; ISO 527
Flexural Yield Strength	89.0 MPa	12900 psi	1.3 mm/min, 50 mm span; ASTM D 790
	92.0 MPa	13300 psi	2 mm/min; ISO 178
Flexural Modulus	2.23 GPa	323 ksi	2 mm/min; ISO 178
	2.29 GPa	332 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	7.95 J/cm @Temperature -30.0 °C	14.9 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	8.90 J/cm @Temperature 23.0 °C	16.7 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	45.0 kJ/m² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	65.0 kJ/m² @Temperature 23.0 °C	30.9 ft-lb/in² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	80*10*3; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	5.00 J/cm² @Temperature -30.0 °C	23.8 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	7.00 J/cm²	33.3 ft-lb/in²	V-notch Edgew 80*10*3 sp=62mm;

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	ISO 179/1eA Comments
Impact Test	82.0 J @Temperature 23.0 °C	60.5 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	71.5 µm/m-°C @Temperature -40.0 - 95.0 °C	39.7 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
	71.5 µm/m-°C @Temperature 23.0 - 80.0 °C	39.7 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	79.3 µm/m-°C @Temperature -40.0 - 95.0 °C	44.1 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
	79.3 µm/m-°C @Temperature 23.0 - 80.0 °C	44.1 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	119 °C	246 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	124 °C @Thickness 3.20 mm	255 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	141 °C	286 °F	Rate A/50; ASTM D 1525
	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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