

SABIC Innovative Plastics Lexan® 143X PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Improved flow PC with excellent processability and mold release.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-143X-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	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	12 g/10 min @Load 1.20 kg, Temperature 300 °C	12 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	59.0 MPa	8560 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	115 %	115 %	50 mm/min; ISO 527
	117 %	117 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.32 GPa	336 ksi	50 mm/min; ASTM D638
	2.45 GPa	355 ksi	1 mm/min; ISO 527
Flexural Yield Strength	86.0 MPa	12500 psi	1.3 mm/min, 50 mm span; ASTM D790
	90.0 MPa	13100 psi	2 mm/min; ISO 178

Mechanical Properties	Metric ^{Pa}	English	Comments ^{ISO 178}
	2.36 GPa	342 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	8.28 J/cm	15.5 ft-lb/in	ASTM D256
	2.42 J/cm @Temperature -30.0 °C	4.53 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	65.0 kJ/m ²	30.9 ft-lb/in ²	80*10*3; ISO 180/1A
	11.0 kJ/m ² @Temperature -30.0 °C	5.23 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
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	NB	NB	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	6.50 J/cm ²	30.9 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.20 J/cm ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	72.0 J	53.1 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C	33.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	60.0 µm/m-°C	33.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-2

Thermal Properties	@Temperature -40.0 - Metric 40.0 °C	@Temperature -40.0 - English 100 °F	Comments
Deflection Temperature at 1.8 MPa (264 psi)	122 °C	252 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	128 °C @Thickness 3.20 mm	262 °F @Thickness 0.126 in	unannealed; ASTM D648
	129 °C @Thickness 6.40 mm	264 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	141 °C	286 °F	Rate B/50; ASTM D1525
	141 °C	286 °F	Rate B/50; ISO 306
	143 °C	289 °F	Rate B/120; ISO 306

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