

SABIC Innovative Plastics Lexan® FXM2143H PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

FXM2143H is a high flow, UV stabilized, high heat polycarbonate copolymer with an HDT/Af of 142 C.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXM2143H-PC-Copolymer.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	0.230 %	0.230 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.30 %	0.30 %	ISO 62
Linear Mold Shrinkage, Flow	0.0060 - 0.0090 cm/cm @Thickness 3.20 mm	0.0060 - 0.0090 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	46 g/10 min @Load 2.16 kg, Temperature 330 °C	46 g/10 min @Load 4.76 lb, Temperature 626 °F	ASTM D1238
Melt Index of Compound	43 g/10 min @Load 2.16 kg, Temperature 330 °C	43 g/10 min @Load 4.76 lb, Temperature 626 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
	60.0 MPa	8700 psi	50 mm/min; ISO 527
Tensile Strength, Yield	70.0 MPa	10200 psi	Type I, 50 mm/min; ASTM D638
	70.0 MPa	10200 psi	50 mm/min; ISO 527
Elongation at Break	90 %	90 %	Type I, 50 mm/min; ASTM D638
	90 %	90 %	50 mm/min; ISO 527
Elongation at Yield	6.5 %	6.5 %	Type I, 50 mm/min; ASTM D638
	6.5 %	6.5 %	50 mm/min; ISO 527
Tensile Modulus	2.60 GPa	377 ksi	5 mm/min; ASTM D638
	2.60 GPa	377 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	110 MPa	16000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.45 GPa	355 ksi	2 mm/min; ISO 178
	2.55 GPa	370 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.15 J/cm	2.15 ft-lb/in	ASTM D256
	0.750 J/cm	1.41 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	80*10*4; ISO 180/1A
	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	68.0 J	50.2 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
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	155 °C	311 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	142 °C	288 °F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	145 °C	293 °F	
			unannealed; ASTM D648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Vicat Softening Point	160 °C	320 °F	Rate B/50; ISO 306
	161 °C	322 °F	Rate B/50; ASTM D1525
	162 °C	324 °F	Rate B/120; ISO 306

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