

## SABIC Innovative Plastics Lexan® FXM123R PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

FXM123R is a Lexan PC grade in Metallic or Pearlescent effects, part of the VisualFX family. These effects have been developed to meet increasing Aesthetic demands in the Marketplace. Color Package may affect properties, Application testing always recommended. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-FXM123R-PC.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXM123R-PC.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 % @Temperature 23.0 °C	0.35 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	18 g/10 min @Load 1.20 kg, Temperature 300 °C	18 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238
	21 g/10 min @Load 1.20 kg, Temperature 300 °C	21 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	49.0 MPa	7110 psi	Type I, 50 mm/min; ASTM D 638
	50.0 MPa	7250 psi	50 mm/min; ISO 527
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D 638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	50 %	50 %	50 mm/min; ISO 527

Mechanical Properties	70 % Metric	70 % English	Type I, 50 mm/min; ASTM D 638 Comments
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D 638
	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
	2.36 GPa	342 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.38 GPa	345 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	2.14 J/cm @Temperature 23.0 °C	4.01 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ASTM D 4812
Izod Impact, Notched (ISO)	8.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	3.81 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
	10.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	80*10*4; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm <sup>2</sup> @Temperature -30.0 °C	3.81 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cm <sup>2</sup> @Temperature 23.0 °C	4.76 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA

Mechanical Properties	Metric	English	Comments
	51.0 J	37.6 ft-lb	Charpy Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	133 °C	271 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	132 °C	270 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	122 °C	252 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	121 °C	250 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	140 °C	284 °F	Rate B/50; ISO 306
	141 °C	286 °F	Rate B/120; ISO 306
	154 °C	309 °F	Rate B/50; ASTM D 1525

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	Pass	IEC 60695-10-2

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