

## SABIC Innovative Plastics Lexan® FXD104R PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

FXD104R is a Light Diffusion effect, which is part of the VisualFX family. Color Package may affect properties. 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-FXD104R-PC-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FXD104R-PC-Europe-Africa-Middle-East.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 @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.0 g/10 min @Load 5.00 kg, Temperature 220 °C	6.0 g/10 min @Load 11.0 lb, Temperature 428 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	7.0 g/10 min @Load 3.80 kg, Temperature 200 °C	7.0 g/10 min @Load 8.38 lb, Temperature 392 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	69.0 MPa	10000 psi	Type I, 50 mm/min; ASTM D 638
	70.0 MPa	10200 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	115 %	115 %	Type I, 50 mm/min; ASTM D 638
	120 %	120 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.30 GPa	334 ksi	5 mm/min; ASTM D 638

Mechanical Properties	Metric 2.33 GPa	English 341 ksi	Comments 1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	94.0 MPa	13600 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.37 GPa	344 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	1.40 J/cm @Temperature -30.0 °C	2.62 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	9.02 J/cm @Temperature 23.0 °C	16.9 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	12.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	5.71 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*3; ISO 180/1A
	70.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	33.3 ft-lb/in <sup>2</sup> @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	1.50 J/cm <sup>2</sup> @Temperature -30.0 °C	7.14 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	7.50 J/cm <sup>2</sup> @Temperature 23.0 °C	35.7 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Impact Test	63.0 J @Temperature 23.0 °C	46.5 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
	69.7 µm/m-°C	38.7 µin/in-°F	

Thermal Properties	Metric @ Temperature -40.0 - 40.0 °C	English @ Temperature -40.0 - 104 °F	Comments
CTE, linear, Parallel to Flow	71.1 µm/m-°C @Temperature -40.0 - 40.0 °C	39.5 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	71.9 µm/m-°C @Temperature -40.0 - 40.0 °C	39.9 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	127 °C	261 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	126 °C @Thickness 3.20 mm	259 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	144 °C	291 °F	Rate B/50; ISO 306
	145 °C	293 °F	Rate B/120; ISO 306
	154 °C	309 °F	Rate B/50; ASTM D 1525

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