SABIC Innovative Plastics Lexan® FXM4701 PPC

Category : Polymer , Thermoplastic , Polyphthalate Carbonate

Material Notes:

LEXAN FMX4701 is a high heat resistant poly(ester)carbonate injection molding resin. This grade is especially designed to visualize color effects.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-FXM4701-PPC.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/in³	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	0.0080 - 0.010 cm/cm @Thickness 3.20 mm	0.0080 - 0.010 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0080 - 0.010 cm/cm @Thickness 3.20 mm	0.0080 - 0.010 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	2.0 g/10 min @Load 1.20 kg, Temperature 300 °C	2.0 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238
	6.0 g/10 min @Load 5.00 kg, Temperature 300 °C	6.0 g/10 min @Load 11.0 lb, Temperature 572 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	8.0 g/10 min @Load 2.16 kg, Temperature 330 °C	8.0 g/10 min @Load 4.76 lb, Temperature 626 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	64.0 MPa	9280 psi	50 mm/min; ISO 527
	78.0 MPa	11300 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	66.0 MPa	9570 psi	Type I, 50 mm/min; ASTM D 638
	70.0 MPa	10200 psi	50 mm/min; ISO 527
Elongation at Break	>= 50 %	>= 50 %	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
	>= 50 %	>= 50 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D 638
	7.0 %	7.0 %	50 mm/min; ISO 527
Tensile Modulus	2.25 GPa	326 ksi	5 mm/min; ASTM D 638
	2.30 GPa	334 ksi	1 mm/min; ISO 527
Flexural Yield Strength	97.0 MPa	14100 psi	1.3 mm/min, 50 mm span; ASTM D 790
	100 MPa	14500 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.35 GPa	341 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	3.00 J/cm @Temperature 23.0 °C	5.62 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Unnotched	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ASTM D 4812
Izod Impact, Notched (ISO)	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	12.0 kJ/m² @Temperature 23.0 °C	5.71 ft-lb/in² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.50 J/cm² @Temperature 23.0 °C	7.14 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	54.0 J @Temperature 23.0 °C	39.8 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C @Temperature -40.0 - 95.0 °C	44.4 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
	80.0 µm/m-°C @Temperature 23.0 - 80.0 °C	44.4 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ASTM E 831

Thermal Properties	Metric	English	Comments
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	80.0 µm/m-°C @Temperature 23.0 - 80.0 °C	44.4 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	165 °C	329 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	150 °C	302 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	149 °C @Thickness 3.20 mm	300 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	170 °C	338 °F	Rate B/120; ISO 306
	175 °C	347 °F	Rate B/50; ISO 306
	185 °C	365 °F	Rate B/50; ASTM D 1525

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2

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