

SABIC Innovative Plastics Lexan® FST3403 PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® FST3403 resin is a high flow PC Copolymer Resin, suitable for injection molding. This halogen-free flame retardant resin is EN45545 R6 HL3 compliant and an ideal candidate for train interior applications (category R6). It also meets requirements of DIN5510-2, NFPA-130 and PN-K-02511 standards. Available in opaque colors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-FST3403-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.33 g/cc	1.33 g/cc	ASTM D792
Density	1.33 g/cc	0.0480 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/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
Melt Index of Compound	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	70.0 MPa	10200 psi	Type I, 50 mm/min; ASTM D638
	70.0 MPa	10200 psi	50 mm/min; ISO 527
Tensile Strength, Yield	77.0 MPa	11200 psi	Type I, 50 mm/min; ASTM D638
	77.0 MPa	11200 psi	50 mm/min; ISO 527
Elongation at Break	80 %	80 %	Type I, 50 mm/min; ASTM D638
	80 %	80 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638
	6.0 %	6.0 %	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

Flexural Yield Strength Mechanical Properties	110 MPa Metric	16000 psi English	2 mm/min; ISO 178 Comments
	115 MPa	16700 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.70 GPa	392 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.30 J/cm	2.44 ft-lb/in	ASTM D256
	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	12.0 kJ/m ²	5.71 ft-lb/in ²	80*10*4; ISO 180/1A
	13.0 kJ/m ²	6.19 ft-lb/in ²	80*10*3; ISO 180/1A
	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	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	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	NB	NB	80*10*4; ISO 180/1U
	NB	NB	80*10*4; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.40 J/cm ²	6.66 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	0.500 J/cm ²	2.38 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	Comments Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.00 J/cm ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	80.0 J @Temperature 23.0 °C	59.0 ft-lb @Temperature 73.4 °F	ASTM D3763
Impact Test	125 J	92.2 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	105 °C	221 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	104 °C @Thickness 3.20 mm	219 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	95.0 °C	203 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	93.0 °C @Thickness 3.20 mm	199 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	114 °C	237 °F	Rate B/50; ASTM D1525
	114 °C	237 °F	Rate B/50; ISO 306
	115 °C	239 °F	Rate B/120; ISO 306

Descriptive Properties	Value	Comments
Fire Safety Hazard Level - Requirement set R6	HL3	EN EN 45545-2:2013

Descriptive Properties	Value	Comments
Smoke density, DS-4, 50 kW/m ² , 3 mm	<150	ISO 5659-2
Smoke density, VOF4, 50 kW/m ² , 3mm	<300	ISO 5659-2
Smoke toxicity, CITG (8 min), 50 kW/m ² , 3 mm	0.1	ISO 5659-2

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