

SABIC Innovative Plastics Lexan® IFX3420Z PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® IFX3420Z is a medium viscosity, release containing, injection moldable, polycarbonate grade suitable for use in industry protective eye-wear welding applications. This grades meets the transmission and haze requirements per ANSI 87.1 norm, Scale 3 when molded at 2.0 mm thickness.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-IFX3420Z-PC-Asia-Pacific.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	ASTM D792
	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Water Absorption	0.15 % @Time 86400 sec	0.15 % @Time 24.0 hour	ASTM D570
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Moisture Absorption at Equilibrium	0.35 %	0.35 %	ASTM D570
Water Absorption at Saturation	0.35 %	0.35 %	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	12.5 g/10 min @Load 1.20 kg, Temperature 300 °C	12.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	12 g/10 min @Load 1.20 kg, Temperature 300 °C	12 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
	70.0 MPa	10200 psi	50 mm/min; ISO 527
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric Pa	English	Comments, ISO 527
Elongation at Break	110 %	110 %	Type I, 50 mm/min; ASTM D638
	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 D638
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
	2.40 GPa	348 ksi	5 mm/min; ASTM D638
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 D790
Flexural Modulus	2.25 GPa	326 ksi	2 mm/min; ISO 178
	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	8.50 J/cm	15.9 ft-lb/in	ASTM D256
	1.35 J/cm @Temperature -30.0 °C	2.53 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Unnotched	32.0 J/cm	59.9 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	70.0 kJ/m ²	33.3 ft-lb/in ²	80*10*3; ISO 180/1A
	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	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	NB	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	7.30 J/cm ²	34.7 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.40 J/cm ² @Temperature -30.0 °C	6.66 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA

Dart Drop, Total Energy Mechanical Properties	170 J Metric	125 ft-lb English	ASTM D3029 Comments
	65.0 J	47.9 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Specific Heat Capacity	1.25 J/g-°C	0.299 BTU/lb-°F	ASTM C351
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	137 °C	279 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	123 °C	253 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	132 °C	270 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	141 °C	286 °F	Rate B/50; ISO 306
	142 °C	288 °F	Rate B/120; ISO 306
	154 °C	309 °F	Rate B/50; ASTM D1525

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
Haze	2.2 %	2.2 %	ASTM D1003
	@Thickness 2.54 mm	@Thickness 0.100 in	
Transmission, Visible	13.3 %	13.3 %	2.54 mm; ASTM D1003

Descriptive Properties	Value	Comments
Specific Volume	0.83cm ³ /g	ASTM D792

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