

## SABIC Innovative Plastics Lexan® IFX2420Z PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Lexan® IFX2420Z is a medium viscosity, release containing, injection moldable polycarbonate grade suitable for use in industry protective eye-wear applications specifically for welding. This grades meets the transmission and haze requirements per ANSI 87.1 norm, Scale 2 when molded at 2.0 mm thickness. This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-IFX2420Z-PC-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-IFX2420Z-PC-Asia-Pacific.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>	ASTM D 792
	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.15 %	0.15 %	ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23°C / 50% RH; ISO 62
	0.35 %	0.35 %	ASTM D 570
Water Absorption at Saturation	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 62
	0.35 %	0.35 %	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	12 g/10 min	12 g/10 min	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	
	12.5 g/10 min	12.5 g/10 min	ASTM D 1238
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ASTM D 785
Hardness, Rockwell R	118	118	ASTM D 785
Tensile Strength at Break	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	70.0 MPa Metric	10200 psi English	50 mm/min; ISO 527 Comments
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D 638
	65.0 MPa	9430 psi	50 mm/min; ISO 527
Elongation at Break	110 %	110 %	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	2.35 GPa	341 ksi	1 mm/min; ISO 527
	2.40 GPa	348 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	2.25 GPa	326 ksi	2 mm/min; ISO 178
	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	1.35 J/cm	2.53 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.50 J/cm	15.9 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched	32.0 J/cm	59.9 ft-lb/in	ASTM D 4812
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	12.0 kJ/m <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	70.0 kJ/m <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °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*3 sp=62mm; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	179/1eU
Charpy Impact, Notched	1.40 J/cm <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.30 J/cm <sup>2</sup>	34.7 ft-lb/in <sup>2</sup>	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dart Drop, Total Energy	170 J	125 ft-lb	ASTM D 3029
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	65.0 J	47.9 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Taber Abrasion, mg/1000 Cycles	10	10	CS-17; ASTM D 1044
	@Load 1.00 kg	@Load 2.20 lb	

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	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@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 C 351
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ft <sup>2</sup> -°F	ASTM C 177
Deflection Temperature at 0.46 MPa (66 psi)	137 °C	279 °F	unannealed; ASTM D 648
	@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	
	@Thickness 6.40 mm	@Thickness 0.252 in	unannealed; ASTM D 648
Vicat Softening Point	141 °C	286 °F	Rate B/50; ISO 306
	142 °C	288 °F	Rate B/120; ISO 306

Thermal Properties	154 °C Metric	309 °F English	2-10 P/100' ASTM D 1525 Comments
<b>Optical Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Refractive Index	1.586	1.586	ASTM D 542
Haze	2.2 % @Thickness 2.54 mm	2.2 % @Thickness 0.100 in	ASTM D 1003
Transmission, Visible	37 % @Thickness 2.54 mm	37 % @Thickness 0.100 in	ASTM D 1003

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