

## SABIC Innovative Plastics Lexan® 221R PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

LEXAN 221R is a low viscosity multi purpose grade and contains a release agent to ensure easy processing. This grade is UL94-V2 at 0.4 mm approved.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-221R-PC-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-221R-PC-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 %	0.35 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	21 g/10 min @Load 1.20 kg, Temperature 300 °C	21 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	95.0 MPa	13800 psi	ISO 2039-1
Tensile Strength at Break	65.0 MPa	9430 psi	50 mm/min; ISO 527
Tensile Strength, Yield	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	65.0 kJ/m <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	11.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	5.23 ft-lb/in <sup>2</sup> @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

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	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	
Charpy Impact, Notched	6.50 J/cm <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.20 J/cm <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft <sup>2</sup> -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	133 °C	271 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	122 °C	252 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	140 °C	284 °F	Rate B/50; ISO 306
	141 °C	286 °F	Rate B/120; ISO 306
UL RTI, Electrical	130 °C	266 °F	UL 746B
UL RTI, Mechanical with Impact	125 °C	257 °F	UL 746B
UL RTI, Mechanical without Impact	125 °C	257 °F	UL 746B
Flammability, UL94	V-2	V-2	UL 94
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	V-0	V-0	UL 94
	@Thickness 6.00 mm	@Thickness 0.236 in	
Oxygen Index	25 %	25 %	ISO 4589
Glow Wire Test	850 °C	1560 °F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Optical Properties	Metric	English	Comments
--------------------	--------	---------	----------

Refractive Index Optical Properties	1.586 Metric	1.586 English	ISO 489 Comments
Haze	<= 0.80 % @Thickness 2.54 mm	<= 0.80 % @Thickness 0.100 in	ASTM D1003
Transmission, Visible	88 - 90 %	88 - 90 %	2.54 mm; ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	2.7 @Frequency 1.00e+6 Hz	2.7 @Frequency 1.00e+6 Hz	IEC 60250
	2.7 @Frequency 50.0 - 60.0 Hz	2.7 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	17.0 kV/mm @Thickness 3.20 mm	432 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	27.0 kV/mm @Thickness 1.60 mm	686 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	35.0 kV/mm @Thickness 0.800 mm	889 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
Dissipation Factor	0.0010 @Frequency 50.0 - 60.0 Hz	0.0010 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	IEC 60250

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

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215, Fengxian District, Shanghai City, China