SABIC Lexan® 2014R PC (Europe-Africa-Middle East)

Categories: Polymer; Thermoplastic; Polycarbonate (PC)

Material Notes: LEXAN 2014R is a medium viscosity flame retardant grade, This material contains a release agent to ensure easy processing.

This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Vendors: No vendors are listed for this material. Please click here if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	0.13 %	0.13 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.32 % @Temperature 23.0 °C	0.32 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	on tensile bar; SABIC Method
Melt Flow	8.0 g/10 min @Load 1.20 kg, Temperature 300 °C	8.0 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ISO 2039-2
Hardness, H358/30	100 MPa	14500 psi	ISO 2039-1
Tensile Strength at Break	70.0 MPa	10200 psi	50 mm/min; ISO 527
Tensile Strength, Yield	65.0 MPa	9430 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	95.0 MPa	13800 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	8.00 kJ/m² @Temperature 23.0 °C	3.81 ft-lb/in² @Temperature 73.4 °F	80*10*3; ISO 180/1A
	8.00 kJ/m² @Temperature -30.0 °C	3.81 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	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 @Temperature 23.0 °C	NB @Temperature 73.4 °F	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	0.900 J/cm² @Temperature 23.0 °C	4.28 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.900 J/cm² @Temperature -30.0 °C	4.28 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	9.0 @Load 1.00 kg	9.0 @Load 2.20 lb	CS-17; SABIC Method

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

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature 23.0 - 80.0 °C	38.9 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	139 °C	282 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be

Deflection Temperature at 0.46 MPa (66 psi)	135 °C	282 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	129 °C	264 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	144 °C	291 °F	Rate B/50; ISO 306
	145 °C	293 °F	Rate B/120; ISO 306
UL RTI, Electrical	125 °C	257 °F	UL 746B
UL RTI, Mechanical with Impact	110 °C	230 °F	UL 746B
UL RTI, Mechanical without Impact	125 °C	257 °F	UL 746B
Flammability, UL94	V-2 @Thickness 1.50 mm	V-2 @Thickness 0.0591 in	UL 94
	V-0 @Thickness 2.30 mm	V-0 @Thickness 0.0906 in	UL 94
Oxygen Index	40 %	40 %	LOI; ISO 4589
Glow Wire Flammability Index	850 °C @Thickness 1.00 mm	1560 °F @Thickness 0.0394 in	IEC 60695-2-12
	960 °C @Thickness 3.20 mm	1760 °F @Thickness 0.126 in	IEC 60695-2-12

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ISO 489
Haze	<= 0.80 % @Thickness 2.54 mm	<= 0.80 % @Thickness 0.100 in	ASTM D 1003
Transmission, Visible	88 - 90 % @Thickness 2.54 mm	88 - 90 % @Thickness 0.100 in	ASTM D 1003

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