

SABIC Innovative Plastics Lexan® 500R PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

LEXAN 500R is a medium viscosity, 10% glass reinforced, flame retardant grade, especially designed for applications requiring high rigidity together with high heat resistance and excellent impact performance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-500R-PC-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.25 g/cc	0.0452 lb/in ³	ISO 1183
Moisture Absorption	0.130 %	0.130 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.31 %	0.31 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0060 cm/cm	0.0020 - 0.0060 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	8.0 g/10 min @Load 1.20 kg, Temperature 300 °C	8.0 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	115 MPa	16700 psi	ISO 2039-1
Tensile Strength at Break	45.0 MPa	6530 psi	5 mm/min; ISO 527
Tensile Strength, Yield	60.0 MPa	8700 psi	5 mm/min; ISO 527
Elongation at Break	7.0 %	7.0 %	5 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	5 mm/min; ISO 527
Tensile Modulus	3.30 GPa	479 ksi	1 mm/min; ISO 527
Flexural Yield Strength	95.0 MPa	13800 psi	2 mm/min; ISO 178
Flexural Modulus	3.40 GPa	493 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*3; ISO 180/1A
	8.00 kJ/m ² @Temperature -30.0 °C	3.81 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
	130 kJ/m ² @Temperature -30.0 °C	61.9 ft-lb/in ² @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
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.50 J/cm ²	7.14 ft-lb/in ²	ISO 179/2C
	0.900 J/cm ²	4.28 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Taber Abrasion, mg/1000 Cycles	11	11	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 µm/m-°C	22.2 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Thermal Conductivity	0.210 W/m-K	1.46 BTU-in/hr-ft ² -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	140 °C	284 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	132 °C	270 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	136 °C	277 °F	Annealed 120°C, 2hrs; ISO 75/Ae
Vicat Softening Point	141 °C	286 °F	Rate B/50; ISO 306
	143 °C	289 °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-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VA	5VA	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	35 %	35 %	ISO 4589
Glow Wire Test	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Thermal Properties	Metric	English	Comments
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	2.8	2.8	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	2.9	2.9	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	25.0 kV/mm	635 kV/in	
Dielectric Strength	@Thickness 1.60 mm	@Thickness 0.0630 in	in oil; IEC 60243-1
	33.0 kV/mm	838 kV/in	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.0010	0.0010	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dissipation Factor	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	175 V	175 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2
Haze, 2.54 mm	NA%	ASTM D1003

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