

SABIC Innovative Plastics Lexan® 503RS PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

LEXAN 503RS is a medium viscosity, glass reinforced, flame retardant grade UV stabilized grade.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-503RS-PC-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.26 g/cc	0.0455 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	65.0 MPa	9430 psi	5 mm/min; ISO 527
Tensile Strength, Yield	70.0 MPa	10200 psi	5 mm/min; ISO 527
Elongation at Break	4.0 %	4.0 %	5 mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	5 mm/min; ISO 527
Tensile Modulus	3.90 GPa	566 ksi	1 mm/min; ISO 527
Flexural Yield Strength	120 MPa	17400 psi	2 mm/min; ISO 178
Flexural Modulus	4.00 GPa	580 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	9.00 kJ/m ²	4.28 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
	100 kJ/m ² @Temperature -30.0 °C	47.6 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1U

Charpy Impact Unnotched Mechanical Properties	NB Metric	NB English	Comments
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.800 J/cm ²	3.81 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	

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)	142 °C	288 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	137 °C	279 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	144 °C	291 °F	Rate B/50; ISO 306
	147 °C	297 °F	Rate B/120; ISO 306
Flammability, UL94	V-0	V-0	UL 94 by SABIC-IP
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	36 %	36 %	ISO 4589
Glow Wire Test	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

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	
	2.9	2.9	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	

Electrical Properties	16.0 kV/mm Metric	406 kV/in English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	From IEC 60243-1
Dissipation Factor	0.0010	0.0010	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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

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