

## SABIC Innovative Plastics Lexan® ML3513 PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

LEXAN ML3513 is a high viscosity, 30% short fibre glass reinforced, flame retardant grade, especially designed for connectors and relay separators. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-ML3513-PC-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-ML3513-PC-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.11 %	0.11 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.26 % @Temperature 23.0 °C	0.26 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	on tensile bar; SABIC Method
Melt Flow	4.0 g/10 min @Load 1.20 kg, Temperature 300 °C	4.0 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	10 g/10 min @Load 10.0 kg, Temperature 265 °C	10 g/10 min @Load 22.0 lb, Temperature 509 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	104	104	ISO 2039-2
Hardness, H358/30	135 MPa	19600 psi	ISO 2039-1
Tensile Strength at Break	75.0 MPa	10900 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	4.50 GPa	653 ksi	1 mm/min; ISO 527
Flexural Strength	120 MPa	17400 psi	2 mm/min; ISO 178
Flexural Modulus	4.50 GPa	653 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	6.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	2.86 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*3; ISO 180/1A
	7.00 kJ/m <sup>2</sup> @Temperature 23.0 °C	3.33 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*3; ISO 180/1A

Mechanical Properties	Metric	English	Comments
Izod Impact, Unnotched (ISO)	@Temperature 23.0 °C	@Temperature 73.4 °F	80*10*3; ISO 180/1U
	35.0 kJ/m <sup>2</sup>	16.7 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1U
Charpy Impact Unnotched	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/2C
Charpy Impact, Notched	@Temperature -30.0 °C	@Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.500 J/cm <sup>2</sup>	2.38 ft-lb/in <sup>2</sup>	ISO 179/2C
	@Temperature -20.0 °C	@Temperature -4.00 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/2C
	0.600 J/cm <sup>2</sup>	2.86 ft-lb/in <sup>2</sup>	ISO 179/2C
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/2C
Taber Abrasion, mg/1000 Cycles	@Load 1.00 kg	@Load 2.20 lb	CS-17; SABIC Method
	24	24	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	28.0 µm/m-°C	15.6 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Thermal Conductivity	0.220 W/m-K	1.53 BTU-in/hr-ft <sup>2</sup> -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	145 °C	293 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	140 °C	284 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	147 °C	297 °F	Rate B/50; ISO 306
	150 °C	302 °F	Rate B/120; ISO 306

Thermal Properties	153 °C Metric	307 °F English	Rate A/50: ISO 306 Comments
UL RTI, Electrical	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical without Impact	80.0 °C	176 °F	UL 746B
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94
Oxygen Index	33 %	33 %	LOI; ISO 4589
Glow Wire Test	850 °C @Thickness 1.00 mm	1560 °F @Thickness 0.0394 in	Glow Wire Flammability Index; IEC 60695-2-12
	960 °C @Thickness 3.20 mm	1760 °F @Thickness 0.126 in	Glow Wire Flammability Index; IEC 60695-2-12

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	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
	3.1 @Frequency 50.0 - 60.0 Hz	3.1 @Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	16.0 kV/mm @Thickness 3.20 mm	406 kV/in @Thickness 0.126 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
Comparative Tracking Index	150 V	150 V	IEC 60112

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

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