

SABIC LEXAN™ ML3729R

Excellent flow, UV stabilized, grade which contains a release agent to ensure easy processing.
Information provided by SABIC

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Water Absorption	0.27 %	0.27 %	23°C/sat; ISO 62
Moisture Absorption	0.0900 %	0.0900 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC method
Melt Flow	6.0 g/10 min @Load 1.20 kg, Temperature 250 °C	6.0 g/10 min @Load 2.65 lb, Temperature 482 °F	cm ³ /10 min; ISO 1133
	36 g/10 min @Load 1.20 kg, Temperature 300 °C	36 g/10 min @Load 2.65 lb, Temperature 572 °F	cm ³ /10 min; ISO 1133
	39 g/10 min @Load 1.20 kg, Temperature 300 °C	39 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527
	62.0 MPa	8990 psi	50 mm/min; ASTM D638
Elongation at Break	108 %	108 %	50 mm/min; ASTM D638
	110 %	110 %	50 mm/min; ISO 527
Elongation at Yield	5.7 %	5.7 %	50 mm/min; ISO 527
	6.0 %	6.0 %	50 mm/min; ASTM D638
Tensile Modulus	2.30 GPa	334 ksi	1mm/min; ISO 527
	2.41 GPa	350 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	85.0 MPa	12300 psi	2 mm/min; ISO 178
	101 MPa	14600 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.41 GPa	350 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.86 J/cm	12.9 ft-lb/in	ASTM D256
	0.550 J/cm @Temperature -30.0 °C	1.03 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	12.0 kJ/m ²	5.71 ft-lb/in ²	80*10*4; ISO 180/1A
	4.00 kJ/m ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA

	0.500 J/cm ² @Temperature -30.0 °C	2.38 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	66.0 J	48.7 ft-lb	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	72.0 µm/m-°C @Temperature -40.0 - 40.0 °C	40.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E831
CTE, linear, Transverse to Flow	78.0 µm/m-°C @Temperature -40.0 - 40.0 °C	43.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E831
	78.0 µm/m-°C @Temperature -40.0 - 40.0 °C	43.3 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Hot Ball Pressure Test	125 °C	257 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	133 °C	271 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	135 °C @Thickness 3.20 mm	275 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	121 °C	250 °F	1.8 MPa Edgew 120*10*4 sp=100mm; ISO 75/Ae
	124 °C @Thickness 3.20 mm	255 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	139 °C	282 °F	Rate B/50; ASTM D1525
	139 °C	282 °F	Rate B/50; ISO 306
	140 °C	284 °F	Rate B/120; ISO 306

Processing Properties	Metric	English	Comments
Nozzle Temperature	265 - 290 °C	509 - 554 °F	Injection Molding
Zone 1	250 - 270 °C	482 - 518 °F	
Zone 2	260 - 280 °C	500 - 536 °F	
Zone 3	270 - 295 °C	518 - 563 °F	
Melt Temperature	270 - 295 °C	518 - 563 °F	
Mold Temperature	70.0 - 95.0 °C	158 - 203 °F	
Drying Temperature	120 °C	248 °F	Injection Molding
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	Injection Molding
	48.0 hour	48.0 hour	Cumulative; Injection Molding
Moisture Content	0.020 %	0.020 %	
Back Pressure	0.300 - 0.700 MPa	43.5 - 102 psi	
Shot Size	40 - 60 %	40 - 60 %	
Vent Depth	0.00250 - 0.00760 cm	0.000984 - 0.00299 in	
Screw Speed	40 - 70 rpm	40 - 70 rpm	