

SABIC Innovative Plastics Lexan® 3413R PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

30% GR, provides improved mechanical properties and UL94V-1 rated at 0.058". Internal mold release added.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-3413R-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	ASTM D792
Density	1.44 g/cc	0.0520 lb/in ³	ASTM D792
Water Absorption	0.14 %	0.14 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.26 %	0.26 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	5.0 g/10 min	5.0 g/10 min	ASTM D1238
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	
	19 g/10 min	19 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 300 °C	@Load 11.0 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	92	92	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength at Break	99.0 MPa	14400 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
Flexural Yield Strength	153 MPa	22200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	6.61 GPa	959 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.06 J/cm	1.99 ft-lb/in	ASTM D256
Izod Impact, Unnotched	11.21 J/cm	21.00 ft-lb/in	ASTM D4812
Tensile Impact Strength	67.0 kJ/m ²	31.9 ft-lb/in ²	Type S; ASTM D1822

Mechanical Properties Dart Drop, Total Energy	Metric J/m ²	English ft-lbf/in ²	Comments ASTM D3029
Taber Abrasion, mg/1000 Cycles	24	24	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	21.6 µm/m-°C @Temperature -40.0 - 95.0 °C	12.0 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
Specific Heat Capacity	1.13 J/g-°C	0.270 BTU/lb-°F	ASTM C351
Thermal Conductivity	0.220 W/m-K	1.53 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	151 °C @Thickness 6.40 mm	304 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	146 °C @Thickness 6.40 mm	295 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	165 °C	329 °F	Rate B/50; ASTM D1525
UL RTI, Electrical	120 °C	248 °F	UL 746B
UL RTI, Mechanical with Impact	120 °C	248 °F	UL 746B
UL RTI, Mechanical without Impact	130 °C	266 °F	UL 746B
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	UL 94
	V-1 @Thickness 1.47 mm	V-1 @Thickness 0.0579 in	UL 94
	V-0 @Thickness 2.99 mm	V-0 @Thickness 0.118 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+17 ohm-cm	>= 1.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.31 @Frequency 1.00e+6 Hz	3.31 @Frequency 1.00e+6 Hz	ASTM D150
	3.35 @Frequency 50.0 - 60.0 Hz	3.35 @Frequency 50.0 - 60.0 Hz	ASTM D150

Electrical Properties	18.7 kV/mm Metric	475 kV/in English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0011	0.0011	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0070	0.0070	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	Tungsten; ASTM D495
Comparative Tracking Index	0.00 - 100 V	0.00 - 100 V	UL 746A
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

Descriptive Properties	Value	Comments
Specific Volume	0.69cm ³ /g	ASTM D792

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