SABIC Innovative Plastics Lexan® 3413R PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan* resin 3413R is a flame retardant polycarbonate grade with 30% glass fiber reinforcement to meet UL 94 V1 listing at 1.5mm. This grade can be considered for applications requiring higher stiffness and flame retardancy.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-3413R-PC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	ASTM D792
Density	1.439 g/cc	0.05199 lb/in³	ASTM D792
Water Absorption	0.14 % @Time 86400 sec	0.14 % @Time 24.0 hour	ASTM D570
Moisture Absorption at Equilibrium	0.26 %	0.26 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm @Thickness 3.20 mm	0.0010 - 0.0030 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	19 g/10 min @Load 5.00 kg, Temperature 300 °C	19 g/10 min @Load 11.0 lb, Temperature 572 °F	ASTM D1238

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/m²	31.9 ft-lb/in²	Type S; ASTM D1822
Dart Drop, Total Energy	5.00 J	3.69 ft-lb	ASTM D3029

Mechanical Properties	Metric	English	Comments
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-ft²-°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	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
Dielectric Strength	18.7 kV/mm @Thickness 3.20 mm	475 kV/in @Thickness 0.126 in	in air; ASTM D149
Dissipation Factor	0.0011 @Frequency 50.0 - 60.0	0.0011 @Frequency 50.0 - 60.0	ASTM D150

Electrical Properties	Metric	English	Comments
	0.0070 @Frequency 1.00e+6 Hz	0.0070 @Frequency 1.00e+6 Hz	ASTM D150
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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