

LEXAN™ 3413R resin

Polycarbonate

SABIC Innovative Plastics

Message:

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

General Information			
UL YellowCard	E121562-220881		
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Additive	Mold Release		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.43	g/cm ³	
--	1.44	g/cm ³	
Specific Volume	0.697	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
300°C/1.2 kg	5.0	g/10 min	
300°C/5.0 kg	19	g/10 min	
Molding Shrinkage - Flow (3.20 mm)	0.10 to 0.30	%	Internal Method
Water Absorption			ASTM D570
24 hr	0.14	%	
Equilibrium, 23°C	0.26	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	92		
R-Scale	120		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Break)	100	MPa	ASTM D638
Tensile Elongation ² (Break)	2.0	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	6610	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	153	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	24.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	110	J/m	ASTM D256
Unnotched Izod Impact (23°C)	1100	J/m	ASTM D4812
Gardner Impact (23°C)	5.00	J	ASTM D3029
Tensile Impact Strength ⁵	67.0	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	151	°C	
1.8 MPa, Unannealed, 6.40 mm	146	°C	
Vicat Softening Temperature	165	°C	ASTM D1525 ⁶
CLTE - Flow (-40 to 95°C)	2.2E-5	cm/cm/°C	ASTM E831
Specific Heat	1130	J/kg/°C	ASTM C351
Thermal Conductivity	0.22	W/m/K	ASTM C177
RTI Elec	120	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+17	ohms·cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	19	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.35		
60 Hz	3.35		
1 MHz	3.31		
Dissipation Factor			ASTM D150
50 Hz	1.1E-3		
60 Hz	1.1E-3		
1 MHz	7.0E-3		
Arc Resistance ⁷	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 5		UL 746
High Amp Arc Ignition (HAI)	PLC 4		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	HB		
1.47 mm	V-1		
3.00 mm	V-0		
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	293 to 316	°C	
Middle Temperature	304 to 327	°C	
Front Temperature	316 to 338	°C	
Nozzle Temperature	310 to 332	°C	
Processing (Melt) Temp	316 to 338	°C	

Mold Temperature	82.2 to 116	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm

NOTE		
1.	Type I, 5.0 mm/min	
2.	Type I, 5.0 mm/min	
3.	1.3 mm/min	
4.	1.3 mm/min	
5.	Type S	
6.	Rate B (120°C/h), Loading 2 (50 N)	
7.	Tungsten Electrode	

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