

LEXAN™ 3414R resin

Polycarbonate

SABIC Innovative Plastics

Message:

40% GR, provides improved mechanical properties and UL94V-1 rated at 0.058". Internal mold release added.

General Information			
UL YellowCard	E121562-220883		
Filler / Reinforcement	Glass Fiber,40% Filler by Weight		
Additive	Mold Release		
Processing Method	Injection Molding		
Multi-Point Data	Shear DMA (ASTM D4065)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.52	g/cm ³	ASTM D792
Specific Volume	0.658	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	13	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.10 to 0.20	%	Internal Method
Water Absorption			ASTM D570
24 hr	0.12	%	
Equilibrium, 23°C	0.23	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	93		
R-Scale	119		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Break)	125	MPa	ASTM D638
Tensile Elongation ² (Break)	3.0	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	9650	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	186	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	32.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	130	J/m	ASTM D256
Unnotched Izod Impact (23°C)	1300	J/m	ASTM D4812
Gardner Impact (23°C)	6.78	J	ASTM D3029
Tensile Impact Strength ⁵	67.2	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	154	°C	
1.8 MPa, Unannealed, 6.40 mm	146	°C	

Vicat Softening Temperature	166	°C	ASTM D1525 ⁶
CLTE - Flow (-40 to 95°C)	1.6E-5	cm/cm/°C	ASTM E831
Specific Heat	1050	J/kg/°C	ASTM C351
Thermal Conductivity	0.22	W/m/K	ASTM C177
RTI Elec	130	°C	UL 746
RTI Imp	130	°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)	18	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.53		
60 Hz	3.53		
1 MHz	3.48		
Dissipation Factor			ASTM D150
50 Hz	1.3E-3		
60 Hz	1.3E-3		
1 MHz	6.7E-3		
Arc Resistance ⁷	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 4		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
1.12 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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