

LEXAN™ 3414R resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN 3414R is a high viscosity, 40% glass reinforced, flame retardant grade, especially designed for applications requiring high rigidity together with high heat resistance.

General Information			
UL YellowCard	E45329-236654		
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Additive	Flame retardancy		
Features	Rigidity, high		
	Heat resistance, high		
	Viscosity, High		
	Flame retardancy		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.52	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	4.00	cm³/10min	ISO 1133
Molding Shrinkage - Flow ¹	0.10 - 0.30	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.23	%	ISO 62
Equilibrium, 23°C, 50% RH	0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	145	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10000	MPa	ISO 527-2/1
Tensile Stress (Break)	100	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	%	ISO 527-2/5
Flexural Modulus ²	8500	MPa	ISO 178
Flexural Stress	145	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	32.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C ³	5.0	kJ/m²	ISO 179/1eA
23°C ⁴	6.0	kJ/m²	ISO 179/1eA
23°C	9.0	kJ/m²	ISO 179/2C

Charpy Unnotched Impact Strength ⁵			ISO 179/1eU
-30°C	40	kJ/m ²	ISO 179/1eU
23°C	40	kJ/m ²	ISO 179/1eU
Notched Izod Impact ⁶			ISO 180/1A
-30°C	6.0	kJ/m ²	ISO 180/1A
23°C	7.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁷			ISO 180/1U
-30°C	35	kJ/m ²	ISO 180/1U
23°C	35	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁸			
0.45 MPa, unannealed, 100 mm span	144	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	139	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	155	°C	ISO 306/A50
--	147	°C	ISO 306/B50
--	145	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE - Flow (23 to 80°C)	2.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.22	W/m/K	ISO 8302
RTI Elec	130	°C	UL 746
RTI Imp	125	°C	UL 746
RTI	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength			IEC 60243-1
0.800mm, in oil	33	kV/mm	IEC 60243-1
1.00 mm ⁹	20	kV/mm	IEC 60243-1
1.60mm, in oil	25	kV/mm	IEC 60243-1
3.20mm, in oil	16	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.20		IEC 60250
60 Hz	3.20		IEC 60250
1 MHz	3.10		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		IEC 60250
60 Hz	1.0E-3		IEC 60250
1 MHz	0.010		IEC 60250
Comparative Tracking Index	125	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94

Glow Wire Flammability Index			IEC 60695-2-12
1.00 mm	850	°C	IEC 60695-2-12
1.60 mm	960	°C	IEC 60695-2-12
Oxygen Index	38	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	270 - 300	°C	
Middle Temperature	280 - 310	°C	
Front Temperature	290 - 320	°C	
Nozzle Temperature	280 - 310	°C	
Processing (Melt) Temp	290 - 320	°C	
Mold Temperature	80.0 - 120	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*3 sp=62mm		
4.	80*10*3 sp=62mm		
5.	80*10*3 sp=62mm		
6.	80*10*3		
7.	80*10*3		
8.	120*10*4 mm		
9.	Short-Time		

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