

LEXAN™ 3413R resin

Polycarbonate

SABIC Innovative Plastics

Message:

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.

General Information			
UL YellowCard	E45587-236875	E207780-228395	
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	Flame retardancy		
Features	Rigidity, high		
	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.43	g/cm³	ASTM D792
--	1.44	g/cm³	ASTM D792
Specific Volume	0.697	cm³/g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	19	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.10 - 0.30	%	Internal method
Water Absorption			ASTM D570
24 hr	0.14	%	ASTM D570
Equilibrium, 23°C	0.26	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
Class m	92		ASTM D785
Class r	120		ASTM D785
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)	6620	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
Dart Drop Impact (23°C)	5.42	J	ASTM D3029
Tensile Impact Strength ⁵	67.2	kJ/m²	ASTM D1822

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	152	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	146	°C	ASTM D648
Vicat Softening Temperature	166	°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	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		ASTM D150
60 Hz	3.35		ASTM D150
1 MHz	3.31		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	1.1E-3		ASTM D150
60 Hz	1.1E-3		ASTM D150
1 MHz	7.0E-3		ASTM D150
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
1.47 mm	V-1		UL 94
3.00 mm	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	293 - 316	°C	
Middle Temperature	304 - 327	°C	
Front Temperature	316 - 338	°C	
Nozzle Temperature	310 - 332	°C	
Processing (Melt) Temp	316 - 338	°C	

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

NOTE		
1.	Type 1, 5.0 mm/min	
2.	Type 1, 5.0 mm/min	
3.	1.3 mm/min	
4.	1.3 mm/min	
5.	Type S	
6.	标准 B (120°C/h), 载荷2 (50N)	
7.	Tungsten electrode	

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