

LEXANTM FR RESINS 3413R

REGION ASIA

DESCRIPTION

LEXAN 3413R Polycarbonate (PC) is an injection moldable flame retardant grade that is 30% glass fiber filled. It has a UL94 V1@2mm rating and is available in various opaque color options.

TYPICAL PROPERTY VALUES

Revision 20190920

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	99	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	153	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	6610	MPa	ASTM D 790
Hardness, Rockwell M	92	-	ASTM D 785
Hardness, Rockwell R	120	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	24	mg/1000cy	ASTM D 1044
IMPACT			
Izod Impact, unnotched, 23°C	1121	J/m	ASTM D 4812
Izod Impact, notched, 23°C	106	J/m	ASTM D 256
Tensile Impact Strength, Type S	67	kJ/m ²	ASTM D 1822
Falling Dart Impact (D 3029), 23°C	5	J	ASTM D 3029
THERMAL			
Vicat Softening Temp, Rate B/50	165	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	151	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	146	°C	ASTM D 648
CTE, -40°C to 95°C, flow	2.16E-05	1/°C	ASTM E 831
Specific Heat	1.13	J/g·°C	ASTM C 351
Thermal Conductivity	0.22	W/m·°C	ASTM C 177
Relative Temp Index, Elec	120	°C	UL 746B
Relative Temp Index, Mech w/impact	120	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°C	UL 746B
PHYSICAL			
Specific Gravity	1.43	-	ASTM D 792
Specific Volume	0.69	cm ³ /g	ASTM D 792
Density	1.44	g/cm ³	ASTM D 792
Water Absorption, 24 hours	0.14	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.26	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.1 – 0.3	%	SABIC method
Melt Flow Rate, 300°C/5.0 kgf	19	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	>1.E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	18.7	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.35	-	ASTM D 150

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Permittivity, 1 MHz	3.31	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0011	-	ASTM D 150
Dissipation Factor, 1 MHz	0.007	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	5	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	<u>E207780-228395</u>	-	-
UL Yellow Card Link 2	<u>E45587-236875</u>	-	-
UL Recognized, 94V-1 Flame Class Rating	1.47	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	2.99	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	48	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	315 – 340	°C	
Nozzle Temperature	310 – 330	°C	
Front - Zone 3 Temperature	315 – 340	°C	
Middle - Zone 2 Temperature	305 – 325	°C	
Rear - Zone 1 Temperature	295 – 315	°C	
Mold Temperature	80 – 115	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.