

LEXANT™ FR RESINS 3412R

REGION AMERICAS

DESCRIPTION

LEXANT™ 3412R resin is a 20% glass fiber filled, 4.3 MFR polycarbonate, MVR of 6. Mold release. Flame retardant, UL94 V0 and 5VA rated. Available in natural and opaque colors.

TYPICAL PROPERTY VALUES

Revision 20230201

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	110	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	5	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	131	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	5510	MPa	ASTM D790
Hardness, Rockwell M	91	-	ASTM D785
Hardness, Rockwell R	122	-	ASTM D785
Taber Abrasion, CS-17, 1 kg	17	mg/1000cy	ASTM D1044
IMPACT			
Izod Impact, unnotched, 23°C	1014	J/m	ASTM D4812
Izod Impact, notched, 23°C	106	J/m	ASTM D256
Tensile Impact Strength, Type S	63	kJ/m ²	ASTM D1822
Falling Dart Impact (D 3029), 23°C	5	J	ASTM D3029
THERMAL			
Vicat Softening Temp, Rate B/50	165	°C	ASTM D1525
HDT, 0.45 MPa, 6.4 mm, unannealed	148	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	146	°C	ASTM D648
CTE, -40°C to 95°C, flow	2.7E-05	1/°C	ASTM E831
Specific Heat	1.17	J/g·°C	ASTM C351
Thermal Conductivity	0.21	W/m·°C	ASTM C177
Relative Temp Index, Elec	130	°C	UL 746B
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°C	UL 746B
PHYSICAL			
Specific Gravity	1.35	-	ASTM D792
Specific Volume	0.74	cm ³ /g	ASTM D792
Density	1.356	g/cm ³	ASTM D792
Water Absorption, (23°C/24hrs)	0.16	%	ASTM D570
Water Absorption, (23°C/Saturated)	0.29	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.1 – 0.3	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	4.3	g/10 min	ASTM D1238
ELECTRICAL			
Volume Resistivity	>1.E+17	Ω.cm	ASTM D257
Dielectric Strength, in air, 3.2 mm	19.2	kV/mm	ASTM D149
Relative Permittivity, 50/60 Hz	3.17	-	ASTM D150

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Permittivity, 1 MHz	3.13	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.0009	-	ASTM D150
Dissipation Factor, 1 MHz	0.0073	-	ASTM D150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
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	E121562-101729324	-	-
UL Yellow Card Link 2	E121562-220878	-	-
UL Recognized, 94V-1 Flame Class Rating	1.47	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	2.99	mm	UL 94
UL Recognized, 94-5VA 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	

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