LEXAN™ FR RESINS 3412R

REGION AMERICAS

DESCRIPTION

20% GR, provides improved mechanical properties and UL94 V-1 rated at 0.058". Internal mold release added.

TYPICAL PROPERTY VALUES

Revision 20191022

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	110	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	5	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	131	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	5510	MPa	ASTM D 790
Hardness, Rockwell M	91	-	ASTM D 785
Hardness, Rockwell R	122	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	17	mg/1000cy	ASTM D 1044
IMPACT			
Izod Impact, unnotched, 23°C	1014	J/m	ASTM D 4812
Izod Impact, notched, 23°C	106	J/m	ASTM D 256
Tensile Impact Strength, Type S	63	kJ/m²	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	148	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	146	°C	ASTM D 648
CTE, -40°C to 95°C, flow	2.7E-05	1/°C	ASTM E 831
Specific Heat	1.17	J/g-°C	ASTM C 351
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 D 792
Specific Volume	0.74	cm³/g	ASTM D 792
Density	1.356	g/cm³	ASTM D 792
Water Absorption, 24 hours	0.16	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.29	%	ASTM D 570
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 D 1238
ELECTRICAL			
Volume Resistivity	>1.E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	19.2	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.17	-	ASTM D 150

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Permittivity, 1 MHz	3.13	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0009	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0073	-	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	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	

DISCLAIMER