LEXAN™ FR RESIN LF1520A

DESCRIPTION

LEXAN LF1520A is a compound based on Polycarbonate (PC) resin containing 20% glass fiber and 15% PTFE. Added features of this material include: flame retardant, wear resistant and tight tolerance.

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	93	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	93	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	5	%	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	148	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6200	MPa	ASTM D790
IMPACT [1]			
Izod Impact, unnotched, 23°C	534	J/m	ASTM D4812
Izod Impact, notched, 23°C	112	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	17	J	ASTM D3763
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	133	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	128	°C	ASTM D648
CTE, -40°C to 40°C, flow	3.06E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.22E-05	1/°C	ASTM E831
Relative Temp Index, Elec [2]	80	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	80	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	80	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.47	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [3]	0.15 – 0.25	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [3]	0.2 – 0.45	%	SABIC method
ELECTRICAL [1]			
Comparative Tracking Index (UL) {PLC} [2]	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0 [2]	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 1 [2]	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4 [2]	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC} [2]	3	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-220960	-	-
UL Yellow Card Link 2	E207780-228438	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 310	°C	
Nozzle Temperature	280 – 305	°C	
Front - Zone 3 Temperature	290 – 310	°C	
Middle - Zone 2 Temperature	275 – 300	°C	
Rear - Zone 1 Temperature	265 – 290	°C	
Mold Temperature	70 – 95	°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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

DISCLAIMER