LEXAN™ FR RESIN LCF1506

DESCRIPTION

LEXAN LCF1506 compound is based on Polycarbonate (PC) resin containing 15% carbon fiber, 5% PTFE. Added features of this grade include: Electrically Conductive, Internally Lubricated, Wear Resistant and Flame Retardant

GENERAL INFORMATION	
Features	Flame Retardant, Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber, PTFE
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	111	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	111	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4.1	%	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	160	MPa	ASTM D790
Flexural Stress, brk, 2.6 mm/min, 100 mm span	154	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9080	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	8410	MPa	ASTM D790
K-factor xE-10, PV=2000 psi-fpm vs Steel	1000	-	SABIC method
Coefficient of Friction on steel, Static	0.41	-	ASTM D1894
Coefficient of Friction on steel,Kinetic	0.19	-	ASTM D1894
IMPACT [1]			
Izod Impact, unnotched, 23°C	283	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	11	J	ASTM D3763
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	141	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	137	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	144	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	139	°C	ASTM D648
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL [1]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.31	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [2]	0.05 – 0.15	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [2]	0.2 – 0.3	%	SABIC method
ELECTRICAL [1]			
Surface Resistivity [3]	1.E+04	Ω	ASTM D257
Static Decay, 5000V to <50V	<0.01	Seconds	FTMS101B
FLAME CHARACTERISTICS [4]			
UL Yellow Card Link	E121562-220955	-	-
UL Yellow Card Link 2	E207780-228432	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [5]			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 315	°C	
Nozzle Temperature	290 – 315	°C	
Front - Zone 3 Temperature	290 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	275 – 295	°C	
Mold Temperature	70 – 105	°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) 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.

(3) Measurement meets requirements as specified in ASTM D4496.

(4) 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.

(5) 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