LEXAN™ FR RESIN JK2500

DESCRIPTION

LEXAN JK2500 compound is based on Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend containing 20% carbon fiber. Added features of this grade include: Electrically Conductive, EMI/RFI Shielding Effectiveness of 21 dB at 1.5 mm, Non-Brominated, Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Electrically Conductive, EMI/RFI Shielding, Non Cl/Br flame retardant, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber
Polymer Types	Polycarbonate + ABS (PC+ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20241028

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield, 5 mm/min	63	MPa	ISO 527
Tensile Stress, break, 5 mm/min	63	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.2	%	ISO 527
Tensile Strain, break, 5 mm/min	2.3	%	ISO 527
Tensile Modulus, 1 mm/min	11130	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	110	MPa	ISO 178
Flexural Stress, break, 2 mm/min	110	MPa	ISO 178
Flexural Modulus, 2 mm/min	10090	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	63	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	63	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.4	%	ASTM D638
Tensile Modulus, 5 mm/min	11030	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	112	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9230	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	15	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Izod Impact, unnotched, 23°C	224	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	14	J	ASTM D3763
THERMAL [1]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
CTE, 23°C to 80°C, flow	7.70E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	8.0E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	111	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	98	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	93	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	96	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.26E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.30E-05	1/°C	ASTM E831
Relative Temp Index, Elec [2]	60	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	60	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	60	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.31	-	ASTM D792
Melt Flow Rate, 300°C/1.2 kgf	25	g/10 min	ASTM D1238
Mold Shrinkage, flow, 3.2 mm [3]	0.06 – 0.15	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [3]	0.2 – 0.4	%	SABIC method
ELECTRICAL [1]			
Volume Resistivity [4]	1.E+02	Ω.cm	ASTM D257
Surface Resistivity [4]	1.E+04	Ω	ASTM D257
Hot-Wire Ignition (HWI), PLC 2	1	mm	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-221059	-	-
UL Yellow Card Link 2	E207780-228503	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1	mm	UL 94
INJECTION MOLDING [5]			
Drying Temperature	80 – 90	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	24	Hrs	
Melt Temperature	270 – 310	°C	
Nozzle Temperature	270 – 300	°C	
Front - Zone 3 Temperature	270 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 275	°C	
Mold Temperature	50 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	35 – 75	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.038 – 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) Measurement meets requirements as specified in ASTM D4496.
(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