LEXAN™ FR Resin LGK3020

DESCRIPTION

LEXAN LGK3020 compound is based on Polycarbonate (PC) resin containing 20% glass fiber and 10% glass flake. Added features of this grade include: Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 50 mm/min	117	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	4	%	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	147	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6570	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	122	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	146	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.7E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	4.68E-05	1/°C	ASTM D696
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	1.43	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.13	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm [3]	0.05 – 0.25	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [3]	0.15 – 0.35	%	SABIC method
ELECTRICAL [1]			
Dielectric Strength, in oil, 3.2 mm	17.7	kV/mm	ASTM D149
Hot-Wire Ignition (HWI), PLC 0	1.5	mm	UL 746A

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
High Amp Arc Ignition (HAI), PLC 4	1.5	mm	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-228440	-	-
UL Yellow Card Link 2	E45587-236909	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
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	

(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.

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