LNP™ ELCRIN™ DF0023RCCG

DESCRIPTION

LNP ELCRIN DF0023RCCG compound is based on recycled Polycarbonate (PC) resin containing 10% glass fiber. Added features of this grade include: Good Ductility, Good Processability, Non-Brominated & Non-Chlorinated Flame Retardant, Light-blocking at 0.5 mm. Post-Consumer Recycling (PCR) Polycarbonate content up to 50%. UL94 V2 at 0.3 mm and V0 at 1.5 mm, that also incorporates renewable feedstock through ISCC+ mass-balance certification.

GENERAL INFORMATION	
Features	Bio-Renewable, No PFAS intentionally added (PCR contains <50ppm total organic fluorine content)
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive EV Batteries
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets, Speaker - Earphone

TYPICAL PROPERTY VALUES

Revision 20260907

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield, 5 mm/min	52	MPa	ISO 527
Tensile Stress, break, 5 mm/min	38	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4	%	ISO 527
Tensile Strain, break, 5 mm/min	9	%	ISO 527
Tensile Modulus, 1 mm/min	4000	MPa	ISO 527
Tensile Modulus, 5 mm/min	4000	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	10	%	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4	%	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	39	MPa	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	52	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	3400	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	92	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	91	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	17	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	110	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	18	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	123	kJ/m²	ISO 179/1eU
Izod Impact, notched, 23°C	220	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1600	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	75	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, 23°C	17	J	ASTM D3763

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Dart Impact Peak Force, 23°C	1.6	N	ASTM D3763
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	113	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	118	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	115	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	121	°C	ASTM D648
Vicat Softening Temp, Rate B/120	121	°C	ISO 306
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]			
Density	1.27	g/cm³	ISO 1183
Mold Shrinkage, flow [3]	0.3 – 0.5	%	SABIC method
Mold Shrinkage, xflow [3]	0.3 – 0.5	%	SABIC method
Melt Volume Rate, MVR at 300°C/1.2 kg	10	cm³/10 min	ISO 1133
Specific Gravity	1.28	-	ASTM D792
FLAME CHARACTERISTICS [2]			
UL Recognized, 94V-2 Flame Class Rating	0.3	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Yellow Card Link	E207780-10225571	-	-
INJECTION MOLDING [4]			
Drying Temperature	110	°C	
Drying Time	3 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Nozzle Temperature	285 – 305	°C	
Mold Temperature	80 – 110	°C	

(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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