LNP™ ELCRIN™ DX23A1RC1

ER017028

DESCRIPTION

LNP ELCRIN DX23A1RC1 compound is based on recycled polycarbonate (PC) resin containing a total of 75% recycled content with up to 25% post-consumer recycled (PCR) polycarbonate content and 50% pre-consumer recycled glass fiber content. Added features of this grade include: high modulus, non-brominated and non-chlorinated flame retardant. Available in black color only.

INDUSTRY	SUB INDUSTRY
Consumer	Personal Accessory
Electrical and Electronics	Electronic Components

TYPICAL PROPERTY VALUES

Revision 20260904

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	168	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.0	%	ISO 527
Tensile Modulus, 1 mm/min	15700	MPa	ISO 527
Flexural Stress, break, 2 mm/min	251	MPa	ISO 178
Flexural Modulus, 2 mm/min	15500	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	164	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D638
Tensile Modulus, 5 mm/min	14700	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	15000	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	14	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	12	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	46	kJ/m²	ISO 180/1U
Izod Impact, unnotched, 23°C	640	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	740	J/m	ASTM D4812
Izod Impact, notched, 23°C	130	J/m	ASTM D256
Izod Impact, notched, -30°C	120	J/m	ASTM D256
Instrumented Impact Total Energy, 23°C	22	J	ASTM D3763
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	43	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	50	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	111	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	104	°C	ISO 75/Af
Vicat Softening Temp, Rate B/50	111	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	114	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	110	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	104	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.4E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.4E-05	1/°C	ASTM E831
PHYSICAL (1)			
Density	1.64	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
Melt Volume Rate, MVR at 300°C/2.16 kg	11	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/5.0 kg	45	cm³/10 min	ISO 1133
Specific Gravity	1.65	-	ASTM D792
Mold Shrinkage, flow (2)	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow (2)	0.1 – 0.3	%	SABIC method
Melt Flow Rate, 300°C/2.16 kgf	14	g/10 min	ASTM D1238
Melt Flow Rate, 300°C/5.0 kgf	50	g/10 min	ASTM D1238
ELECTRICAL (1)			
Dielectric Constant			
2.5 GHz	3.91	-	SABIC method
5 GHz	3.93	-	SABIC method
Dissipation Factor			
2.5 GHz	0.008	-	SABIC method
5 GHz	0.008	-	SABIC method
FLAME CHARACTERISTICS (3)			
UL Yellow Card Link	E207780	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	0.6	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	110	°C	
Drying Time (Cumulative)	12	Hrs	
Drying Time	3 – 6	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	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	rpm	

(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 articles.

(3) 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.

(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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ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentionally PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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