LNP™ ELCRIN™ 6XEUIQ2RCC

DESCRIPTION

LNP ELCRIN 6XEUIQ2RCC (also known as ELCRIN ER011567) is based on Polycarbonate / Polybutylene Terephthalate (PC/PBT) alloy, utilizing iQ PBT generation 2 technology with minimum 42% post-consumer recycle (PCR) content. Added features of this material include: excellent low temperature impact strength, good surface aesthetics, good chemical resistance.

GENERAL INFORMATION	
Features	Chemical Resistance, High Flow, Sustainable (Advanced Recycling), Aesthetics/Visual effects, Impact resistant, Low temperature impact, Weatherable/UV stable, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate + PBT (PC+PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors, Automotive Crash and Chassis, Automotive Exteriors
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Personal Recreation, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231122

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	145	%	ASTM D638
Tensile Modulus, 50 mm/min	2071	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	85	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2080	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	54	MPa	ISO 527
Tensile Strain, break, 50 mm/min	139	%	ISO 527
Tensile Stress, break, 50 mm/min	52	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Flexural Modulus, 2 mm/min	2108	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	81	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	23	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	56	kJ/m²	ISO 179/1eA
Charpy 0°C, V-notch Edgew 80*10*4 sp=62mm	53	kJ/m²	ISO 179/1eA
Charpy -40°C, V-notch Edgew 80*10*4 sp=62mm	21	kJ/m²	ISO 179/1eA

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C	658	J/m	ASTM D256
Izod Impact, notched, 0°C	639	J/m	ASTM D256
Izod Impact, notched, -40°C	278	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	60	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, 23°C	52	J	ASTM D3763
Instrumented Dart Impact Peak Force, 23°C	4850	N	ASTM D3763
THERMAL (1)			
Melting Temperature	217	°C	ISO 11357-3
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	79	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	101	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	82	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	103	°C	ASTM D648
Vicat Softening Temp, Rate B/50	115	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	116	°C	ASTM D1525
CTE, -40°C to 40°C, flow	8.40E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	8.70E-05	1/°C	ASTM E831
PHYSICAL (1)			
Specific Gravity	1.2	-	ASTM D792
Density	1.2	g/cm³	ISO 1183
Melt Flow Rate, 250°C/5.0 kgf	16	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 250°C/5 kg	15	cm³/10 min	ASTM D1238
Moisture Absorption, (23°C/50% RH/24 hrs)	0.06	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.11	%	ASTM D570
Mold Shrinkage, flow (2)	0.8	%	SABIC method
Mold Shrinkage, xflow (2)	0.8	%	SABIC method
INJECTION MOLDING (3)			
Drying Temperature	110	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	245 – 270	°C	
Nozzle Temperature	245 – 270	°C	
Front - Zone 3 Temperature	245 – 270	°C	
Middle - Zone 2 Temperature	245 – 270	°C	
Rear - Zone 1 Temperature	245 – 270	°C	
Mold Temperature	65 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 80	rpm	
Shot to Cylinder Size	50 – 80	%	
Vent Depth	0.013 – 0.02	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) 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

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.