LNP™ ELCRIN™ 6F006IiQ

DESCRIPTION

LNP ELCRIN 6F006IiQ (Formerly known under the experimental grade name ER009957), utilizing ELCRIN iQ upcycling technology, is 30% glass-reinforced, impact modified thermoplastic alloy PC/iQ PBT based compound. The grade contains a minimum of 23% PCR weight content, improved toughness and ductility.

GENERAL INFORMATION	
Features	Advanced Recycling, Impact resistant, No PFAS intentionally added (PCR contains <50ppm total organic fluorine content)
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polycarbonate + PBT (PC+PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electrical Components and Infrastructure

TYPICAL PROPERTY VALUES

Revision 20260901

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	101	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	99	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D638
Tensile Modulus, 5 mm/min	7700	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	150	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6900	MPa	ASTM D790
Hardness, Rockwell R	110	-	ASTM D785
Tensile Stress, break, 5 mm/min	105	MPa	ISO 527
Tensile Modulus, 1 mm/min	8000	MPa	ISO 527
Flexural Strength, 2 mm/min	163	MPa	ISO 178
Flexural Modulus, 2 mm/min	7600	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	750	J/m	ASTM D4812
Izod Impact, notched, 23°C	140	J/m	ASTM D256
Izod Impact, notched, -30°C	100	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	6	J	ASTM D3763
Instrumented Dart Impact Total Energy, 23°C	15	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	14	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
THERMAL [1]			
Vicat Softening Temp, Rate B/50	150	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	159	°C	ASTM D648

© 2026 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	201	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.70E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.00E-05	1/°C	ASTM E831
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Af
Vicat Softening Temp, Rate B/50	150	°C	ISO 306
PHYSICAL			
Specific Gravity [1]	1.44	-	ASTM D792
Melt Flow Rate			
250°C/5.0 kgf	14	g/10 min	ASTM D1238
Density	1.44	g/cm³	ISO 1183
Melt Volume Rate			
250°C/5.0 kg	11	cm³/10 min	ISO 1133
265°C/5.0 kg	18	cm³/10 min	ISO 1133
Moisture Absorption, (23°C/50% RH/24hrs)	0.07	%	ISO 62-4
Water Absorption, (23°C/24hrs)	0.14	%	ISO 62-1
Mold Shrinkage, xflow [2]	0.4 – 0.7	%	SABIC method
Mold Shrinkage, flow [2]	0.3 – 0.4	%	SABIC method
ELECTRICAL [1]			
Dielectric Constant			
1.1 GHz	3.4	-	SABIC method
1.9 GHz	3.41	-	SABIC method
5 GHz	3.45	-	SABIC method
10 GHz	3.48	-	SABIC method
Dissipation Factor			
1.1 GHz	0.0168	-	SABIC method
1.9 GHz	0.016	-	SABIC method
5 GHz	0.138	-	SABIC method
10 GHz	0.0118	-	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	260 – 280	°C	
Nozzle Temperature	255 – 280	°C	
Front - Zone 3 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	255 – 275	°C	
Rear - Zone 1 Temperature	250 – 270	°C	
Mold Temperature	65 – 95	°C	
Back Pressure	0.3 – 0.6	MPa	
Screw Speed	50 – 80	rpm	
Shot to Cylinder Size	50 – 80	%	
Vent Depth	0.013 – 0.02	mm	

© 2026 Copyright by SABIC. All rights reserved

(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.

© 2026 Copyright by SABIC. All rights reserved