

LNPT™ ELCRIN™ 61000EUiQ2

DESCRIPTION

LNP ELCRIN 61000EUiQ2 (also known as ELCRIN ERO11566) is based on Polycarbonate / Polybutylene Terephthalate (PC/PBT) alloy, utilizing iQ PBT generation 2 technology with 22% post consumer recycled content. Added features of this material include: excellent low temperature impact strength, improve retention of mechanical properties under UV exposure, 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

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	43	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D638
Tensile Modulus, 50 mm/min	2000	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	79	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2010	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Stress, break, 50 mm/min	48	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	146	%	ISO 527
Tensile Modulus, 1 mm/min	1980	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	76	MPa	ISO 178
Flexural Modulus, 2 mm/min	2050	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	740	J/m	ASTM D256
Izod Impact, notched, 0°C	710	J/m	ASTM D256
Izod Impact, notched, -40°C	420	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	58	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, 23°C	50	J	ASTM D3763
Instrumented Dart Impact Peak Force, 23°C	5000	N	ASTM D3763
Izod Impact, notched 80°10*4 +23°C	56	kJ/m ²	ISO 180/1A
Izod Impact, notched 80°10*4 0°C	56	kJ/m ²	ISO 180/1A
Izod Impact, notched 80°10*4 -40°C	46	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10*4 sp=62mm	60	kJ/m ²	ISO 179/1eA
Charpy 0°C, V-notch Edgew 80°10*4 sp=62mm	56	kJ/m ²	ISO 179/1eA
Charpy -40°C, V-notch Edgew 80°10*4 sp=62mm	44	kJ/m ²	ISO 179/1eA

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 3.2mm, unannealed	84	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	107	°C	ASTM D648
Vicat Softening Temp, Rate B/50	118	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	120	°C	ASTM D1525
CTE, -40°C to 40°C, flow	8.6E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.1E-05	1/°C	ASTM E831
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
Relative Temp Index, Elec ⁽²⁾	75	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	75	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	75	°C	UL 746B
PHYSICAL ⁽¹⁾			
Specific Gravity	1.24	-	ASTM D792
Melt Flow Rate, 250°C/5.0 kgf	12	g/10 min	ASTM D1238
Density	1.23	g/cm ³	ISO 1183
Moisture Absorption, (23°C/50% RH/24hrs) ⁽³⁾	0.07	%	ISO 62-4
Water Absorption, (23°C/24hrs) ⁽³⁾	0.12	%	ISO 62-1
Melt Volume Rate, MVR at 250°C/5.0 kg	11	cm ³ /10 min	ISO 1133
Mold Shrinkage, flow ⁽⁴⁾	0.7	%	SABIC method
Mold Shrinkage, xflow ⁽⁴⁾	0.8	%	SABIC method
ELECTRICAL ^{(1) (2)}			
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
High Voltage Arc Track Rate {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-103938363	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C
INJECTION MOLDING ⁽⁵⁾			
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	%	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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) 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) Based on internal method similar to ISO 62.
- (4) 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.
- (5) 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.

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 unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

MORE INFORMATION

For curve data and CAE cards, please visit and register at <https://materialfinder.sabic-specialties.com>

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 NON-INFRINGEMENT 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.