

# LNPT<sup>™</sup> ELCRIN<sup>™</sup> W1000JiQ

## DESCRIPTION

LNP ELCRIN W1000JiQ compound is based on Polybutylene terephthalate (PBT) resin utilizing ELCRIN iQ upcycling technology containing minimum 56% Post-Consumer Recycling (PCR) weight content. Added features of this grade include: Biocompatible (ISO10993), Improved Processing, Low Extractables, Healthcare. Applications include sprinklers, nozzles, pumps, cosmetic packages etc.

GENERAL INFORMATION	
Features	Chemical Resistance, Good Processability, Sustainable (Advanced Recycling), Biocompatibility-ISO10993, Food contact, Healthcare/Formula lock, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

  

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Consumer	Home Appliances
Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging, Food & Beverage

## TYPICAL PROPERTY VALUES

Revision 20230627

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 50 mm/min	56	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	29	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	3.2	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D638
Tensile Modulus, 50 mm/min	2550	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	84	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2560	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	3	%	ISO 527
Tensile Strain, break, 50 mm/min	130	%	ISO 527
Tensile Modulus, 1 mm/min	2550	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2430	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched, 23°C	50	J/m	ASTM D256
Izod Impact, notched, -30°C	46	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	61	J	ASTM D3763
Izod Impact, notched 80°10*4 +23°C	4	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80°10*4 -30°C	2	kJ/m <sup>2</sup>	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	5	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL <sup>(1)</sup></b>			
HDT, 1.82 MPa, 3.2mm, unannealed	48	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	8.1E-05	1/°C	ASTM E831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	133	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/120	168	°C	ISO 306
CTE, -40°C to 40°C, flow	7.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.1E-05	1/°C	ISO 11359-2
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.31	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup>	1.6 – 2.4	%	SABIC method
Melt Flow Rate, 250°C/2.16 kgf	23	g/10 min	ASTM D1238
Density	1.31	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.16	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.07	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	21	cm <sup>3</sup> /10 min	ISO 1133
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	245 – 260	°C	
Nozzle Temperature	240 – 255	°C	
Front - Zone 3 Temperature	245 – 260	°C	
Middle - Zone 2 Temperature	240 – 255	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Mold Temperature	50 – 75	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 100	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.013 – 0.025	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.

## MORE INFORMATION

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

## 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.



## 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.