

LNP™ ELCRIN™ 6K002XiQ

DESCRIPTION

LNP ELCRIN 6K002XiQ compound is based on Polycarbonate / Polybutylene Terephthalate (PC/PBT) blend, utilizing ELCRIN iQ upcycling technology containing minimum 18% Post-Consumer Recycling (PCR) weight content and minerals. Added features of this grade include: good balance of Impact, Ductility and Excellent Pull-Strength.

GENERAL INFORMATION

Features	Post-Consumer Recycled (PCR) content
Fillers	Mineral
Polymer Types	Polycarbonate + PBT (PC+PBT)
Processing Techniques	Injection Molding

INDUSTRY

Automotive
Consumer
Electrical and Electronics

SUB INDUSTRY

Automotive Interiors
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical Devices and Displays

TYPICAL PROPERTY VALUES

Revision 20210716

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	59	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	130	%	ASTM D638
Tensile Modulus, 5 mm/min	4000	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	104	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3500	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	58	MPa	ISO 527
Tensile Stress, break, 5 mm/min	54	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.8	%	ISO 527
Tensile Strain, break, 5 mm/min	120	%	ISO 527
Tensile Modulus, 1 mm/min	3800	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	96	MPa	ISO 178
Flexural Modulus, 2 mm/min	3450	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	250	J/m	ASTM D256
Izod Impact, notched, -30°C	90	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	65	J	ASTM D3763
Izod Impact, notched 80°10°4 +23°C	20	kJ/m ²	ISO 180/1A
Izod Impact, notched 80°10°4 -30°C	8	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm	23	kJ/m ²	ISO 179/1eA

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.6E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.3E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	4.6E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.3E-05	1/°C	ISO 11359-2
PHYSICAL ⁽¹⁾			
Specific Gravity	1.3	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm ⁽²⁾	0.7 – 0.9	%	SABIC method
Melt Flow Rate, 250°C/5.0 kgf	7	g/10 min	ASTM D1238
Density	1.3	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.28	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 265°C/5.0 kg	13	cm ³ /10 min	ISO 1133
INJECTION MOLDING ⁽³⁾			
Drying Temperature	110	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 275	°C	
Nozzle Temperature	250 – 265	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Middle - Zone 2 Temperature	245 – 265	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Mold Temperature	40 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 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.

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