LNP™ ELCRIN™ W10001iQ

DESCRIPTION

LNP ELCRIN W10001iQ compound is based on Polybutylene terephthalate (PBT) resin utilizing ELCRIN iQ upcycling technology containing minimum 44% Post-Consumer Recycling (PCR) weight content. Added features of this grade include: Non-Chlorinated, Non-Brominated Flame Retardant, Excellent Chemical Resistance and UL94V0 Flame Rating. This is a good candidate for a variety of applications needing a more sustainable FR and PBT solution.

GENERAL INFORMATION	
Applications	Automotive , Electronics, evse, ev socket
Features	Flame Retardant, Chemical Resistance, Advanced Recycling, Non Cl/Br flame retardant
Fillers	Unreinforced
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Home Decoration, Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20260901

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	41	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	10	%	ASTM D638
Tensile Modulus, 5 mm/min	2740	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	66	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2430	MPa	ASTM D790
IMPACT [1]			
Izod Impact, unnotched, 23°C	550	J/m	ASTM D4812
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	55	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	150	°C	ASTM D648
Vicat Softening Temp, Rate A/50	208	°C	ASTM D1525
Vicat Softening Temp, Rate A/120	207	°C	ASTM D1525
Relative Temp Index, Elec [2]	150	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	100	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	140	°C	UL 746B
PHYSICAL [1]			
Density	1.31	g/cm³	ISO 1183
Melt Volume Rate, MVR at 250°C/2.16 kg	20	cm³/10 min	ISO 1133
Mold Shrinkage on Tensile Bar, flow [3]	1.8 – 2.8	%	SABIC method
FLAME CHARACTERISTICS [2]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Yellow Card Link	E207780-639217	-	-
UL Recognized, 94V-1 Flame Class Rating	0.8	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥1	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	≥3	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	245 – 260	°C	
Nozzle Temperature	230 – 255	°C	
Front - Zone 3 Temperature	240 – 260	°C	
Middle - Zone 2 Temperature	235 – 250	°C	
Rear - Zone 1 Temperature	230 – 240	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	40 – 100	°C	

(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) 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.

(4) 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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