LNP™ ELCRIN™ 610009UXiQ

DESCRIPTION

LNP™ ELCRIN™ 610009UXiQ - Environmentally responsible and sustainable low carbon footprint compound. 610009UXiQ is impact modified, unreinforced, UV stabilized and FR compound. Renewable content up to 13%.

TYPICAL PROPERTY VALUES

Revision 20190624

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	48	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	41	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.9	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	74	%	ASTM D 638
Tensile Modulus, 5 mm/min	2000	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	75	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2100	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	48	MPa	ISO 527
Tensile Stress, break, 50 mm/min	40	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.6	%	ISO 527
Tensile Strain, break, 50 mm/min	74.8	%	ISO 527
Tensile Modulus, 1 mm/min	2190	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	73	MPa	ISO 178
Flexural Modulus, 2 mm/min	2050	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	490	J/m	ASTM D 256
Izod Impact, notched, -30°C	167	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	50	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	31	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	34	kJ/m²	ISO 179/1eA
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	127	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.16E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.74E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	8.16E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.74E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	122	°C	ISO 75/Bf
Relative Temp Index, Elec (1)	120	°C	UL 746B
Relative Temp Index, Mech w/impact (1)	120	°C	UL 746B
Relative Temp Index, Mech w/o impact (1)	140	°C	UL 746B
PHYSICAL			
Specific Gravity	1.35	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	1.1 – 1.4	%	SABIC method
Melt Flow Rate, 250°C/5.0 kgf	9.3	g/10 min	ASTM D 1238

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.34	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.08	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 250°C/5.0 kg	7	cm³/10 min	ISO 1133
ELECTRICAL (1)			
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥0.63	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 4	≥0.46	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥0.46	mm	UL 746A
FLAME CHARACTERISTICS (1)			
UL Recognized, 94-5VB Flame Class Rating	≥2.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥0.63	mm	UL 94
UL Recognized, 94HB Flame Class Rating	≥0.46	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	12	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 265	°C	
Nozzle Temperature	245 – 260	°C	
Front - Zone 3 Temperature	250 – 265	°C	
Middle - Zone 2 Temperature	245 – 260	°C	
Rear - Zone 1 Temperature	240 – 255	°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	0.025 – 0.038	mm	

(1) Value shown here is based on internal measurement.

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