LNP™ ELCRIN™ COMPOUND 6K002XiQ

DESCRIPTION

LNP™ ELCRIN™ 6K002XiQ - Environmentally responsible and sustainable low carbon footprint compound. ELCRIN 6K002XiQ is a mineral filled alloy of PC (polycarbonate) + iQ PBT (polybutylene terepthalate) resin with a good balance of impact, ductility and excellent pull strength. Renewable content up to 19%.

TYPICAL PROPERTY VALUES

Revision 20190522

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	59	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	60	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.9	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	130	%	ASTM D 638
Tensile Modulus, 5 mm/min	4000	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	104	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	3500	MPa	ASTM D 790
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			
Izod Impact, notched, 23°C	250	J/m	ASTM D 256
Izod Impact, notched, -30°C	90	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	65	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	20	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	23	kJ/m²	ISO 179/1eA
THERMAL			
CTE, -40°C to 40°C, flow	4.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.3E-05	1/°C	ASTM E 831
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			
Specific Gravity	1.3	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.7 – 0.9	%	SABIC method
Melt Flow Rate, 250°C/5.0 kgf	7	g/10 min	ASTM D 1238
Density	1.3	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.28	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Volume Rate, MVR at 265°C/5.0 kg	13	cm³/10 min	ISO 1133
INJECTION MOLDING			
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	

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