LNP™ LUBRICOMP™ Compound ECL36

ECL-4036
REGION EUROPE

DESCRIPTION

LNP LUBRICOMP ECL36 compound is based on Polyetherimide (PEI) resin containing 30% carbon fiber, 15% PTFE. Added features of this grade include: Wear Resistant, Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength, High temperature resistance
Fillers	Carbon Fiber, PTFE
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260903

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	160	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.2	%	ISO 527
Tensile Modulus, 1 mm/min	21600	MPa	ISO 527
Flexural Stress, yield			
2 mm/min	256	MPa	ISO 178
2 mm/min, 80°C	214	MPa	ISO 178
2 mm/min, 120°C	182	MPa	ISO 178
2 mm/min, 150°C	145	MPa	ISO 178
2 mm/min, 200°C	91	MPa	ISO 178
Flexural Strain, break, 2 mm/min	1.6	%	ISO 178
Flexural Modulus			
2 mm/min	18500	MPa	ISO 178
2 mm/min, 80°C	17900	MPa	ISO 178
2 mm/min, 120°C	17400	MPa	ISO 178
2 mm/min, 150°C	16400	MPa	ISO 178
2 mm/min, 200°C	15300	MPa	ISO 178
Flexural Strain, break, 2 mm/min, 80°C	1.5	%	ISO 178
Flexural Strain, break, 2 mm/min, 120°C	1.4	%	ISO 178
Flexural Strain, break, 2 mm/min, 150°C	1.6	%	ISO 178

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Flexural Strain, break, 2 mm/min, 200°C	1	%	ISO 178
IMPACT [1]			
Izod impact, notched			
80*10*3 -40°C	7	kJ/m²	ISO 180/1A
80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, Unnotched			
80*10*4 +23°C	18	kJ/m²	ISO 180/1U
80*10*4 -40°C	25	kJ/m²	ISO 180/1U
THERMAL [1]			
Specific Heat	1890	J/kg-K	ASTM E1269
CTE, 23°C to 60°C, flow	9.E-06	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	2.8E-05	1/°C	ISO 11359-2
Thermal Conductivity	0.33	W/m-K	ASTM D5930
PHYSICAL [1]			
Mold Shrinkage, flow, 24 hrs [2]	0.25	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.1 – 0.4	%	ISO 294
Wear Factor Washer	31	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.39	-	ASTM D3702 Modified: Manual
Static COF	0.48	-	ASTM D3702 Modified: Manual
Density	1.49	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.32	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.21	%	ISO 62
Melt Volume Rate			
345°C/10.0 kg	4 – 6	cm³/10 min	ISO 1133
ELECTRICAL [1]			
Surface Resistivity	1.E+01 – 1.E+06	Ω	ASTM D257
INJECTION MOLDING [3]			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	360 – 375	°C	
Rear - Zone 1 Temperature	355 – 365	°C	
Middle - Zone 2 Temperature	360 – 370	°C	
Front - Zone 3 Temperature	365 – 375	°C	
Nozzle Temperature	365 – 375	°C	
Mold Temperature	140 – 180	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw speed (Circumferential speed)	0.2 – 0.3	m/s	
Vent Depth	0.025 – 0.076	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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