LNP™ LUBRICOMP™ COMPOUND EFL36

EFL-4036
REGION EUROPE

DESCRIPTION

LNP LUBRICOMP EFL36 compound is based on Polyetherimide (PEI) resin containing 30% glass fiber, 15% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, High stiffness/Strength, High temperature resistance
Fillers	Glass 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 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	168	MPa	ISO 527
Tensile Strain, break	2	%	ISO 527
Flexural Stress, yield, 2 mm/min	216	MPa	ISO 178
Flexural Strain, break, 2 mm/min	2.7	%	ISO 178
Flexural Modulus, 2 mm/min	9000	MPa	ISO 178
Flexural Strain, break, 2 mm/min, 80°C	2.5	%	ISO 178
Flexural Strain, break, 2 mm/min, 120°C	2.6	%	ISO 178
Flexural Strain, break, 2 mm/min, 150°C	2.5	%	ISO 178
Flexural Strain, break, 2 mm/min, 200°C	2	%	ISO 178
Flexural Stress, yield, 2 mm/min, 80°C	182	MPa	ISO 178
Flexural Stress, yield, 2 mm/min, 120°C	167	MPa	ISO 178
Flexural Stress, yield, 2 mm/min, 150°C	141	MPa	ISO 178
Flexural Stress, yield, 2 mm/min, 200°C	85	MPa	ISO 178
Flexural Modulus, 2 mm/min, 80°C	8500	MPa	ISO 178
Flexural Modulus, 2 mm/min, 120°C	8200	MPa	ISO 178
Flexural Modulus, 2 mm/min, 150°C	8100	MPa	ISO 178
Flexural Modulus, 2 mm/min, 200°C	7300	MPa	ISO 178
IMPACT [1]			
Multiaxial Impact	3	J	ISO 6603

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*3 -40°C	10	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	35	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -40°C	35	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
THERMAL [1]			
Vicat Softening Temp, Rate B/120	208	°C	ISO 306
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
CTE, 23°C to 60°C, flow	2.8E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	4.E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	204	°C	ISO 75/Af
Thermal Conductivity	0.23	W/m-K	ASTM D5930
Specific Heat	1307	J/kg-K	ASTM E1269
Relative Temp Index, Elec [2]	180	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	170	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	180	°C	UL 746B
PHYSICAL [1]			
Mold Shrinkage, flow, 24 hrs [3]	0.06	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [3]	0.26	%	ISO 294
Wear Factor Washer	35	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.45	-	ASTM D3702 Modified: Manual
Static COF	0.43	-	ASTM D3702 Modified: Manual
Density	1.62	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.32	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.18	%	ISO 62
Melt Volume Rate, MVR at 345°C/5.0 kg	3 – 5	cm³/10 min	ISO 1133
ELECTRICAL [1] [2]			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥0.75	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥0.75	mm	UL 746A
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E45329-101283857	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.75	mm	UL 94
THERMAL PROPERTIES			
Glass Transition Temperature, Tg	214.5	°C	SABIC method
INJECTION MOLDING [4]			
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	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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) 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.

DISCLAIMER