

LNP™ LUBRICOMP™ LCL36E compound

Polyetheretherketone

SABIC Innovative Plastics Europe

Message:

LNP* LUBRICOMP* LCL36E is a compound based on PEEK containing 30% Carbon Fiber and 15% PTFE. Added features of this grade include: Easy Molding, Wear Resistant.
Also known as: LNP* LUBRICOMP* Compound LCL-4036 EM
Product reorder name: LCL36E

General Information			
UL YellowCard	E121562-101284442		
Filler / Reinforcement	Carbon fiber reinforced material, 30% filler by weight		
Additive	PTFE lubricant (15%)		
Features	Good formability		
	Good wear resistance		
	Lubrication		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.51	g/cm ³	ASTM D792
--	1.50	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow: 24 hours	0.31	%	ASTM D955
Transverse flow: 24 hours	0.81	%	ASTM D955
Water Absorption			
24 hr, 50% RH	0.040	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.040	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	21400	MPa	ASTM D638
--	17500	MPa	ISO 527-2/1
Tensile Strength			
Fracture ²	208	MPa	ASTM D638
Fracture	140	MPa	ISO 527-2/5
Tensile Elongation			
Fracture ³	1.6	%	ASTM D638
Fracture	1.0	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁴	23000	MPa	ASTM D790
-- ⁵	22700	MPa	ISO 178

Flexural Stress			
--	321	MPa	ISO 178
Fracture, 50.0mm span ⁶	357	MPa	ASTM D790
Coefficient of Friction			ASTM D3702 Modified
With self-dynamics	0.38		ASTM D3702 Modified
With Self-Static	0.38		ASTM D3702 Modified
Wear Factor			ASTM D3702 Modified
Ring	1.55	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified
Washer	18.0	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	83	J/m	ASTM D256
23°C ⁷	8.6	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	650	J/m	ASTM D4812
23°C ⁸	42	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	11.0	J	ASTM D3763
--	3.30	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	342	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁹	342	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	332	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁰	329	°C	ISO 75-2/Af
Linear thermal expansion coefficient			ASTM D696
	1.4E-5		
Flow: -30 to 30°C	1.4E-5	cm/cm/°C	ASTM D696
	2.9E-5		
Lateral: -30 to 30°C	2.9E-5	cm/cm/°C	ASTM D696
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 - 6.0	hr	
Rear Temperature	370 - 380	°C	
Middle Temperature	380 - 400	°C	
Front Temperature	380 - 400	°C	
Mold Temperature	175 - 190	°C	

Back Pressure	0.300 - 0.700	MPa
Screw Speed	60 - 100	rpm
NOTE		
1.	5.0 mm/min	
2.	Type 1, 5.0 mm/min	
3.	Type 1, 5.0 mm/min	
4.	1.3 mm/min	
5.	2.0 mm/min	
6.	1.3 mm/min	
7.	80*10*4	
8.	80*10*4	
9.	80*10*4 mm	
10.	80*10*4 mm	

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