LNP™ LUBRICOMP™ COMPOUND SCL36

SCL-4036
REGION AMERICAS

DESCRIPTION

LNP LUBRICOMP SCL36 compound is based on Nylon 12 resin containing 15% PTFE, 30% carbon fiber. Added features of this grade include: Wear Resistant, Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber, PTFE
Polymer Types	Polyamide 12 (Nylon 12)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood
Consumer	Home Appliances, Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	157	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.9	%	ASTM D638
Tensile Modulus, 50 mm/min	21400	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	215	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	214	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	15800	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	130	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1	%	ISO 527
Tensile Modulus, 1 mm/min	19420	MPa	ISO 527
Flexural Stress	206	MPa	ISO 178
Flexural Modulus, 2 mm/min	16490	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	686	J/m	ASTM D4812
Izod Impact, notched, 23°C	129	J/m	ASTM D256
Multiaxial Impact	4	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	14	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	39	kJ/m²	ISO 180/1U
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	178	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	173	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	2.9E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.3E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	177	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	170	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.3	-	ASTM D792
Density	1.3	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.09	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.4 – 0.6	%	ASTM D955
Wear Factor Washer	22	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	0	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.41	-	ASTM D3702 Modified: Manual
Static COF	0.3	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.14	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.12 – 0.2	%	
Melt Temperature	225 – 240	°C	
Front - Zone 3 Temperature	225 – 240	°C	
Middle - Zone 2 Temperature	220 – 230	°C	
Rear - Zone 1 Temperature	215 – 225	°C	
Mold Temperature	70 – 80	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

(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.

DISCLAIMER