LNP™ LUBRICOMP™ COMPOUND QCP36

QCL-4536

DESCRIPTION

LNP LUBRICOMP QCP36 compound is based on Nylon 6/10 resin containing 15% PTFE/silicone, 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/Silicone
Polymer Types	Polyamide 610 (Nylon 610)
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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Strain, break	6.2	%	ISO 527
Tensile Strain, yield	1.9	%	ISO 527
Tensile Stress, break	188	MPa	ISO 527
Tensile Stress, yield	188	MPa	ISO 527
Tensile Modulus, 1 mm/min	19200	MPa	ISO 527
Flexural Modulus, 2 mm/min	17000	MPa	ISO 178
Flexural Strength, 2 mm/min	280	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	173	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	173	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	1.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D638
Tensile Modulus, 5 mm/min	19850	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	282	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	16540	MPa	ASTM D790
IMPACT [1]			
Izod Impact, unnotched, 23°C	801	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	6	J	ASTM D3763
Multiaxial Impact	3	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	49	kJ/m²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	212	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	222	°C	ISO 75/Bf
CTE, -40°C to 40°C, flow	2.60E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.80E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	221	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	212	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.52E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.86E-05	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.32	g/cm³	ISO 1183
Mold Shrinkage, flow, 24 hrs [2]	0.35	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.8	%	ISO 294
Density	1.32	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.1	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.8	%	ASTM D955
Wear Factor Washer	15	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.46	-	ASTM D3702 Modified: Manual
Static COF	0.46	-	ASTM D3702 Modified: Manual
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.12 – 0.2	%	
Melt Temperature	270 – 275	°C	
Front - Zone 3 Temperature	270 – 280	°C	
Middle - Zone 2 Temperature	260 – 270	°C	
Rear - Zone 1 Temperature	250 – 260	°C	
Mold Temperature	80 – 95	°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