

LNPTM LUBRICOMPTM COMPOUND QCL34

QCL-4034

DESCRIPTION

LNP LUBRICOMP QCL34 compound is based on Nylon 6/10 resin containing 15% PTFE, 20% 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 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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, break, 5 mm/min	197	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Modulus, 1 mm/min	15560	MPa	ISO 527
Flexural Strength, 2 mm/min	280	MPa	ISO 178
Flexural Modulus, 2 mm/min	12490	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	201	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.7	%	ASTM D638
Tensile Modulus, 50 mm/min	16600	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	289	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	12400	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	10	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	52	kJ/m ²	ISO 180/1U
Izod Impact, unnotched, 23°C	900	J/m	ASTM D4812
Izod Impact, notched, 23°C	110	J/m	ASTM D256
Multiaxial Impact	3	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	10	J	ASTM D3763
THERMAL ⁽¹⁾			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	206	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	221	°C	ISO 75/Bf

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	212	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.1E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	5.8E-05	1/°C	ASTM D696
PHYSICAL ⁽¹⁾			
Moisture Absorption (23°C / 50% RH)	0.3	%	ISO 62
Specific Gravity	1.27	-	ASTM D792
Density	1.29	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.19	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.06 – 0.08	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.4 – 0.6	%	ASTM D955
Wear Factor Washer	26	10 ⁻¹⁰ in ⁴ 5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	0	10 ⁻¹⁰ in ⁴ 5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.39	-	ASTM D3702 Modified: Manual
Static COF	0.33	-	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	