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LNP™ LUBRICOMP™ COMPOUND RCL34

RCL-4034

DESCRIPTION

LNP LUBRICOMP RCL34 compound is based on Nylon 6/6 resin containing 20% carbon fiber, 15% PTFE. 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 66 (Nylon 66)
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	204	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.3	%	ISO 527
Tensile Modulus, 1 mm/min	15200	MPa	ISO 527
Flexural Strength, 2 mm/min	296	MPa	ISO 178
Flexural Modulus, 2 mm/min	12200	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	215	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Modulus, 5 mm/min	16540	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	312	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	13200	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	50	kJ/m²	ISO 180/1U
Multiaxial Impact	2	J	ISO 6603
Izod Impact, notched, 23°C	100	J/m	ASTM D256
Izod Impact, unnotched, 23°C	793	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	8	J	ASTM D3763
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	251	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	261	°C	ISO 75/Bf

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 60°C, flow	9.0E-06	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	7.60E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	262	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	255	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.1E-05	1/°C	ASTM D696
PHYSICAL [1]			
Density	1.31	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.95	%	ISO 62
Specific Gravity	1.33	-	ASTM D792
Density	1.33	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.67	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 3	%	ASTM D955
Wear Factor Washer	24	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.4	-	ASTM D3702 Modified: Manual
Static COF	0.34	-	ASTM D3702 Modified: Manual
Mold Shrinkage on Tensile Bar, flow [2]	0.2 – 0.4	%	SABIC method
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	280 – 305	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Mold Temperature	95 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	