

LNPTTM LUBRICOMPTM 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

Building and Construction
Consumer
Electrical and Electronics
Industrial

SUB INDUSTRY

Building Component
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Mobile Phone - Computer - Tablets
Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

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/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	50	kJ/m ²	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

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CHEMISTRY THAT MATTERS[™]

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/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.95	%	ISO 62
Specific Gravity	1.33	-	ASTM D792
Density	1.33	g/cm ³	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 ⁻⁴ in ⁴ 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	

(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.

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