

LNPT[™] LUBRICOMP[™] COMPOUND RFL46

RFL-4046

DESCRIPTION

LNP LUBRICOMP RFL46 compound is based on Nylon 6/6 resin containing 30% glass fiber, 20% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, High stiffness/Strength
Fillers	Glass 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

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ^{(1) (2)}			
Tensile Stress, break, 5 mm/min	145	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	10400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	213	MPa	ISO 178
Flexural Modulus, 2 mm/min	8700	MPa	ISO 178
Flexural Modulus, 1.3 mm/min, 50 mm span	8400	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	204	MPa	ASTM D790
IMPACT ⁽²⁾			
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
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	8	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m ²	ISO 179/1eU
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Izod Impact, unnotched, 23°C	760	J/m	ASTM D4812
THERMAL ⁽²⁾			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	253	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	262	°C	ISO 75/Af
Vicat Softening Temp, Rate B/120	251	°C	ISO 306
Vicat Softening Temp, Rate A/50	254	°C	ISO 306
CTE, 23°C to 60°C, flow	2.40E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	9.00E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	262	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	254	°C	ASTM D648
PHYSICAL ⁽²⁾			
Density	1.54	g/cm ³	ISO 1183
Moisture Absorption, (23°C/50% RH/24hrs)	0.1 – 0.3	%	ISO 62-4
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.4 – 0.6	%	ISO 62-4
Water Absorption, (23°C/24hrs)	0.7 – 0.9	%	ISO 62-1
Water Absorption, (23°C/saturated)	3.8 – 4.1	%	ISO 62-1
Mold Shrinkage, flow ⁽³⁾	0.3 – 0.5	%	SABIC method
Mold Shrinkage, xflow ⁽³⁾	1.0 – 1.4	%	SABIC method
Specific Gravity	1.54	-	ASTM D792
Dynamic COF	0.59	-	ASTM D3702 Modified: Manual
Static COF	0.9	-	ASTM D3702 Modified: Manual
Wear Factor Washer	16	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified: Manual
INJECTION MOLDING ⁽⁴⁾			
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) mechanical properties have been tested after conditioning (48hrs/ 50%RH.)

(2) 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.

(3) 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.

(4) 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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