

# LNPT<sup>™</sup> LUBRICOMP<sup>™</sup> COMPOUND RFL46ES

RFL-4046 EM HS

## DESCRIPTION

LNP LUBRICOMP RFL46ES compound is based on Nylon 6/6 resin containing 30% glass fiber, 20% PTFE. Added features of this grade include: Wear Resistant, Heat Stabilized, Easy Molding.

GENERAL INFORMATION	
Features	Good Processability, Heat Stabilized, 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
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, brk, Type I, 5 mm/min	146	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Modulus, 5 mm/min	10880	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	223	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9280	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	145	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Modulus, 1 mm/min	10420	MPa	ISO 527
Flexural Stress	221	MPa	ISO 178
Flexural Modulus, 2 mm/min	9260	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	939	J/m	ASTM D4812
Izod Impact, notched, 23°C	97	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	8	J	ASTM D3763
Izod Impact, unnotched 80°10*4 +23°C	56	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80°10*4 +23°C	9	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	251	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	233	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	3.1E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.4E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	251	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	232	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.55	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.43	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	0.2 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.9 – 3	%	ASTM D955
Wear Factor Washer	12	10 <sup>-10</sup> in <sup>4</sup> -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.59	-	ASTM D3702 Modified: Manual
Static COF	0.64	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.82	%	ISO 62
<b>INJECTION MOLDING <sup>(3)</sup></b>			
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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