

## LNP\* Lubricomp\* Compound RFL159

Americas: COMMERCIAL

Also known as: RFL-4015 FR BK8-115  
Product Reorder Name: RFL159

LNP\* Lubricomp\* RFL159 is a compound based on Nylon 6/6 resin containing Glass Fiber and PTFE. Characteristics of this grade are Internally Lubricated and Flame Retardant.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
	Value	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	153	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	153	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D 638
Tensile Modulus, 50 mm/min	11280	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	215	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	215	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	9700	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	149	MPa	ISO 527
Tensile Stress, break, 5 mm/min	149	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	10910	MPa	ISO 527
Flexural Stress	210	MPa	ISO 178
Flexural Modulus, 2 mm/min	9510	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	739	J/m	ASTM D 4812
Izod Impact, notched, 23°C	79	J/m	ASTM D 256
Multiaxial Impact	2	J	ISO 6603
Instrumented Impact Total Energy, 23°C	6	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	257	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	244	°C	ASTM D 648
CTE, -30°C to 30°C, flow	2.9E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	8.7E-05	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	254	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	238	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.62	-	ASTM D 792
Density	1.62	g/cm <sup>3</sup>	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.32	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.1 - 0.3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.9 - 3	%	ASTM D 955
Wear Factor Washer	36	10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr	ASTM D 3702 Modified

Wear Factor Ring	3	10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.42	-	ASTM D 3702 Modified
Static COF	0.47	-	ASTM D 3702 Modified
Moisture Absorption (23°C / 50% RH)	0.49	%	ISO 62

Source GMD, last updated:2010/01/13

## Processing

Parameter	Value	Unit
Injection Molding		
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

Source GMD, last updated:2010/01/13

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) 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.

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