

LNP* Lubricomp* Compound RFL449

Americas: COMMERCIAL

Also known as: LNP* Lubricomp* Compound RFL-4044 FR

Product reorder name: RFL449

LNP* Lubricomp* RFL449 is a compound based on Nylon 6/6 resin containing Glass Fiber and PTFE. Characteristics of this grade are: Internally Lubricated and Flame Retardant.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1130	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	1020	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.8	%	ASTM D 638
Tensile Modulus, 5 mm/min	100500	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1570	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	85200	kgf/cm ²	ASTM D 790
Tensile Stress, break, 5 mm/min	104	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	9370	MPa	ISO 527
Flexural Stress	155	MPa	ISO 178
Flexural Modulus, 2 mm/min	8490	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	38	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	8	cm-kgf/cm	ASTM D 256
Multiaxial Impact	20	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	40	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80°10*4 +23°C	24	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10*4 +23°C	8	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	256	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	239	°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	6.3E-05	1/°C	ASTM D 696

(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±176.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.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	255	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	232	°C	ISO 75/Af
PHYSICAL			
Density	1.75	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.25	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.4 - 0.6	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1 - 3	%	ASTM D 955
Wear Factor Washer	32	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D 3702 Modified
Wear Factor Ring	3	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.45	-	ASTM D 3702 Modified
Static COF	0.48	-	ASTM D 3702 Modified
Moisture Absorption (23°C / 50% RH)	0.41	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	110	°C
Drying Time	3 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	285 - 310	°C
Nozzle Temperature	285 - 305	°C
Front - Zone 3 Temperature	280 - 300	°C
Middle - Zone 2 Temperature	270 - 290	°C
Rear - Zone 1 Temperature	260 - 280	°C
Mold Temperature	80 - 110	°C
Back Pressure	0.1 - 0.3	MPa
Screw Speed	50 - 90	rpm

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