

LNPT[™] LUBRICOMP[™] COMPOUND RFN169

RFL-4216 FR

DESCRIPTION

LNP LUBRICOMP RFN169 compound is based on Nylon 6/6 resin containing 30% glass fiber, Molybdenum disulfide (MoS₂). Added features of this grade include: Wear Resistant, Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Wear resistant, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber, Molybdenum
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⁾			
Tensile Stress, brk, Type I, 5 mm/min	194	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D638
Tensile Modulus, 50 mm/min	14160	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	263	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	12300	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	190	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	14040	MPa	ISO 527
Flexural Stress	266	MPa	ISO 178
Flexural Modulus, 2 mm/min	12120	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	866	J/m	ASTM D4812
Izod Impact, notched, 23°C	105	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763
Izod Impact, unnotched 80°10°4 +23°C	51	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	11	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	258	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	248	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	2.9E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.6E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	257	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	242	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	65	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	65	°C	UL 746B
PHYSICAL ⁽¹⁾			
Specific Gravity	1.68	-	ASTM D792
Density	1.67	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.4	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.2 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.9 – 2	%	ASTM D955
Wear Factor Washer	503	10 ⁻¹⁰ in ⁴ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	6	10 ⁻¹⁰ in ⁴ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.41	-	ASTM D3702 Modified: Manual
Static COF	0.41	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.57	%	ISO 62
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E121562-101284041	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
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) 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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(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.

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.