

LNPT[™] LUBRICOMP[™] COMPOUND RP004S

RL-4540 HS

DESCRIPTION

LNP LUBRICOMP RP004S compound is based on Nylon 6/6 resin containing 20% PTFE/silicone. Added features of this grade include: Heat Stabilized, Wear Resistant.

GENERAL INFORMATION

Features	Heat Stabilized, Wear resistant
Fillers	Unreinforced, PTFE/Silicone
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

INDUSTRY

Building and Construction
Consumer
Electrical and Electronics
Industrial

SUB INDUSTRY

Building Component
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Mobile Phone - Computer - Tablets
Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	59	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4.8	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	18	%	ASTM D638
Tensile Modulus, 50 mm/min	2950	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2150	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	65	MPa	ISO 527
Tensile Stress, break, 5 mm/min	64	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.8	%	ISO 527
Tensile Strain, break, 5 mm/min	19	%	ISO 527
Tensile Modulus, 1 mm/min	2750	MPa	ISO 527
Flexural Stress	78	MPa	ISO 178
Flexural Modulus, 2 mm/min	2220	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	1360	J/m	ASTM D4812
Izod Impact, notched, 23°C	46	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	3	J	ASTM D3763
Izod Impact, unnotched 80°10°4 +23°C	115	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	5	kJ/m ²	ISO 180/1A

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CHEMISTRY THAT MATTERS[™]

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	184	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	57	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.2E-04	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	1.1E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	154	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	57	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.24	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.86	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	1 – 3	%	ASTM D955
Wear Factor Washer	4	10 ⁻⁴ in ³ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	-1	10 ⁻⁴ in ³ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.23	-	ASTM D3702 Modified: Manual
Static COF	0.11	-	ASTM D3702 Modified: Manual
Density	1.24	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.2	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	275 – 290	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Mold Temperature	80 – 95	°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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