

LNPTM LUBRICOMPTM 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	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

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/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A

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 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	-1	10 ⁻¹⁰ in ⁵ -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	