

LNPTM LUBRICOMPTM COMPOUND RFL36S

RFL-4036 HS

DESCRIPTION

LNP LUBRICOMP RFL36S is a compound based on Nylon 66 resin containing 30% Glass Fiber, 15% PTFE. Added features of this material include: Wear Resistant, Heat Stabilized.

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Automotive Under the Hood
Consumer	Home Appliances, Commercial Appliance
Electrical and Electronics	Electrical Devices and Displays, Electrical Components and Infrastructure
Hydrocarbon and Energy	Fossil

TYPICAL PROPERTY VALUES

Revision 20191223

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Modulus, 5 mm/min	10350	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	150	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	8300	MPa	ASTM D 790
Flexural Strength, 1.3 mm/min, 50 mm span	240	MPa	ASTM D 790
Tensile Modulus, 1 mm/min	10300	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.2	%	ISO 527
Tensile Stress, break, 5 mm/min	160	MPa	ISO 527
Flexural Modulus, 2 mm/min	8900	MPa	ISO 178
Flexural Strength, 2 mm/min	235	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	100	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	1040	J/m	ASTM D 4812
Instrumented Impact Energy @ peak, 23°C	10	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	11	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	70	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	16	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	85	kJ/m ²	ISO 179/1eU
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	254	°C	ASTM D 648
Vicat Softening Temp, Rate B/50	253	°C	ASTM D 1525
CTE, -40°C to 40°C, flow	3.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	5.5E-05	1/°C	ASTM E 831
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	248	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	260	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/120	250	°C	ISO 306
Vicat Softening Temp, Rate B/50	253	°C	ISO 306

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 60°C, flow	2.8E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.3E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, flow	3.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.5E-05	1/°C	ISO 11359-2
PHYSICAL			
Density	1.5	g/cm ³	ASTM D 792
Water Absorption, 24 hours	0.5 – 1	%	ASTM D 570
Melt Flow Rate, 300°C/2.16 kgf	23	g/10 min	ASTM D 1238
Dynamic COF	0.57	-	ASTM D 3702 Modified: Manual
Wear Factor Washer	16	10 ⁻¹⁰ in ⁴ 5-min/ft-lb-hr	ASTM D 3702 Modified: Manual
Static COF	16	-	ASTM D 3702 Modified: Manual
Density	1.5	g/cm ³	ISO 1183
Water Absorption, 23°C/24hrs	0.5 – 1	%	ISO 62-1
Melt Volume Rate, MVR at 300°C/2.16 kg	22	cm ³ /10 min	ISO 1133
Mold Shrinkage, flow	0.2 – 0.5	%	SABIC method
Mold Shrinkage, xflow	0.8 – 1.2	%	SABIC method
INJECTION MOLDING			
Drying Temperature	80	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Mold Temperature	95 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

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