

LNPTTM LUBRICOMPTM COMPOUND RFL36S

RFL-4036 HS

DESCRIPTION

LNP LUBRICOMP RFL36S compound is based on Nylon 6/6 resin containing 30% glass fiber, 15% PTFE. Added features of this grade include: Wear Resistant, Heat Stabilized.

GENERAL INFORMATION	
Features	Heat Stabilized, Wear resistant, High stiffness/Strength
Fillers	Glass Fiber, PTFE
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 Modulus, 5 mm/min	10350	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	150	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	8300	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	240	MPa	ASTM D790
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 ⁽¹⁾			
Izod Impact, notched, 23°C	100	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1040	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	10	J	ASTM D3763
Izod Impact, notched 80°10°4 +23°C	11	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80°10°4 +23°C	70	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm	16	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm	85	kJ/m²	ISO 179/1eU
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 3.2mm, unannealed	254	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	253	°C	ASTM D1525
CTE, -40°C to 40°C, flow	3.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.5E-05	1/°C	ASTM E831
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
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 ⁽¹⁾			
Density	1.5	g/cm³	ASTM D792
Water Absorption, (23°C/24hrs)	0.5 – 1	%	ASTM D570
Melt Flow Rate, 300°C/2.16 kgf	23	g/10 min	ASTM D1238
Dynamic COF	0.57	-	ASTM D3702 Modified: Manual
Wear Factor Washer	16	10 ⁻⁴ -10 in ³ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Static COF	0.46	-	ASTM D3702 Modified: Manual
Density	1.5	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.5 – 1	%	ISO 62-1
Melt Volume Rate, MVR at 300°C/2.16 kg	22	cm³/10 min	ISO 1133
Mold Shrinkage, flow ⁽²⁾	0.2 – 0.5	%	SABIC method
Mold Shrinkage, xflow ⁽²⁾	0.8 – 1.2	%	SABIC method
INJECTION MOLDING ⁽³⁾			
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	