LNP™ LUBRICOMP™ 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

Revision 20231109

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^-10 in^5-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	

(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.

DISCLAIMER