LNP™ LUBRILOY™ Compound RF206

RF-30

DESCRIPTION

LNP LUBRILOY RF206 compound is based on Nylon 6/6 resin containing 30% glass fiber and proprietary lubricant. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
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 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 5 mm/min	9000	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	122	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	7200	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	190	MPa	ASTM D790
Tensile Modulus, 1 mm/min	9000	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.2	%	ISO 527
Tensile Stress, break, 5 mm/min	135	MPa	ISO 527
Flexural Modulus, 2 mm/min	7500	MPa	ISO 178
Flexural Strength, 2 mm/min	195	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	95	J/m	ASTM D256
Izod Impact, unnotched, 23°C	800	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	12	J	ASTM D3763
Instrumented Dart Impact Total Energy, 23°C	13	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	12	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	58	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	17	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	70	kJ/m²	ISO 179/1eU
THERMAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	258	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	241	°C	ASTM D648
Vicat Softening Temp, Rate B/50	185	°C	ASTM D1525
CTE, -40°C to 40°C, flow	3.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.9E-05	1/°C	ASTM E831
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	228	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	252	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/120	185	°C	ISO 306
Vicat Softening Temp, Rate B/50	185	°C	ISO 306
CTE, 23°C to 60°C, flow	1.9E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	1.1E-04	1/°C	ISO 11359-2
Relative Temp Index, Elec [2]	65	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	65	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	65	°C	UL 746B
PHYSICAL [1]			
Density	1.24	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.3 – 0.6	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.3 – 0.6	%	ASTM D570
Melt Flow Rate, 300°C/2.16 kgf	30	g/10 min	ASTM D1238
Dynamic COF	0.51	-	ASTM D3702 Modified: Manual
Static COF	0.5	-	ASTM D3702 Modified: Manual
Wear Factor Washer	36	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Water Absorption, (23°C/24hrs)	0.3 – 0.6	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.3 – 0.6	%	ISO 62
Melt Volume Rate, MVR at 300°C/2.16 kg	30	cm³/10 min	ISO 1133
Density	1.24	g/cm³	ISO 1183
Mold Shrinkage, flow [3]	0.2 – 0.6	%	SABIC method
Mold Shrinkage, xflow [3]	1 – 1.4	%	SABIC method
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101344704	-	-
UL Yellow Card Link 2	E45329-101282646	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	270 – 280	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Mold Temperature	80 – 95	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

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(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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) 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.

(4) 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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