LNP™ LUBRICOMP™ Compound SX93441D

PDX-S-93441

DESCRIPTION

LNP LUBRICOMP SX93441D compound is based on Nylon 12 resin containing 20% glass fiber and proprietary lubricant. Added features of this grade include: Internally Lubricated, Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 12 (Nylon 12)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood
Consumer	Home Appliances, Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20260907

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	93	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	86	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	4.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	6.1	%	ASTM D638
Tensile Modulus, 50 mm/min	5410	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	4480	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	92	MPa	ISO 527
Tensile Stress, break, 5 mm/min	91	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.9	%	ISO 527
Tensile Strain, break, 5 mm/min	6.3	%	ISO 527
Tensile Modulus, 1 mm/min	5410	MPa	ISO 527
Flexural Stress	136	MPa	ISO 178
Flexural Modulus, 2 mm/min	4720	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	870	J/m	ASTM D4812
Izod Impact, notched, 23°C	127	J/m	ASTM D256
Multiaxial Impact	3	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	16	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	58	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
THERMAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	175	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	161	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	170	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.2	-	ASTM D792
Density	1.19	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.15	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.3 – 0.6	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.9 – 2	%	ASTM D955
Wear Factor Washer	51	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	7	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.48	-	ASTM D3702 Modified: Manual
Static COF	0.47	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.12 – 0.2	%	
Melt Temperature	225 – 240	°C	
Front - Zone 3 Temperature	225 – 240	°C	
Middle - Zone 2 Temperature	220 – 230	°C	
Rear - Zone 1 Temperature	215 – 225	°C	
Mold Temperature	70 – 80	°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.

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