LNP™ LUBRICOMP™ COMPOUND SP003

SL-4530
REGION ASIA

DESCRIPTION

LNP LUBRICOMP SP003 compound is based on Nylon 12 resin containing 15% PTFE/silicone. Added features of this grade include: Internally Lubricated, Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant
Fillers	Unreinforced, PTFE/Silicone
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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	37	MPa	ASTM D638
Tensile Stress, break	35	MPa	ASTM D638
Tensile Strain, yield	17.5	%	ASTM D638
Tensile Strain, break	23.9	%	ASTM D638
Tensile Modulus, 50 mm/min	1370	MPa	ASTM D638
Flexural Modulus	1370	MPa	ASTM D790
Tensile Stress, yield	38	MPa	ISO 527
Tensile Stress, break	36	MPa	ISO 527
Tensile Strain, yield	18.4	%	ISO 527
Tensile Strain, break	32.9	%	ISO 527
Tensile Modulus, 1 mm/min	1580	MPa	ISO 527
Flexural Stress	44	MPa	ISO 178
Flexural Modulus	1300	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	683	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	5	J	ASTM D3763
Multiaxial Impact	7	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	48	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	150	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	146	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.13E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.08E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.12E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.08E-04	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	134	°C	ISO 75/Bf
PHYSICAL [1]			
Density	1.09	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.9 – 1.1	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1.8 – 2	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	1	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	1.9	%	ISO 294
Wear Factor Washer	13	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.23	-	ASTM D3702 Modified: Manual
Static COF	0.14	-	ASTM D3702 Modified: Manual
Density	1.09	g/cm³	ISO 1183
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.

DISCLAIMER