

# LNPTM LUBRICOMPTM COMPOUND VN001

VL-4210 D

## DESCRIPTION

LNP LUBRICOMP VN001 compound is based on Super Tough Nylon resin containing Molybdenum diSulfide (MoS<sub>2</sub>). Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, Impact resistant, No PFAS intentionally added
Fillers	Molybdenum
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
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 5 mm/min	53	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	48	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	38	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	40.6	%	ASTM D638
Tensile Modulus, 50 mm/min	2290	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	1910	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	56	MPa	ISO 527
Tensile Stress, break, 5 mm/min	53	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5.2	%	ISO 527
Tensile Strain, break, 5 mm/min	28	%	ISO 527
Tensile Modulus, 1 mm/min	2380	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	69	MPa	ISO 178
Flexural Strain, break, 2 mm/min	4	%	ISO 178
Flexural Modulus, 2 mm/min	2080	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	1730	J/m	ASTM D4812
Izod Impact, notched, 23°C	158	J/m	ASTM D256
Multiaxial Impact	22	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	182	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	15	kJ/m <sup>2</sup>	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>THERMAL <sup>(1)</sup></b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	216	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	65	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.18E-04	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	1.18E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	210	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	64	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.1	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.8	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	2 – 5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	2 – 5	%	ASTM D955
Wear Factor Washer	71	10 <sup>-10</sup> in <sup>4</sup> -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.79	-	ASTM D3702 Modified: Manual
Static COF	0.36	-	ASTM D3702 Modified: Manual
Density	1.1	g/cm <sup>3</sup>	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.1	%	ISO 62
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15	%	
Melt Temperature	280 – 295	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	275 – 290	°C	
Rear - Zone 1 Temperature	260 – 270	°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.

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