

LNPTM LUBRICOMPTM COMPOUND ML004S

ML-4040 HS
REGION AMERICAS

DESCRIPTION

LNP LUBRICOMP ML004S compound is based on Polypropylene (PP) resin containing 20% PTFE. Added features of this grade include: Wear Resistant, Heat Stabilized.

GENERAL INFORMATION	
Features	Heat Stabilized, Wear resistant
Fillers	Unreinforced, PTFE
Polymer Types	Polypropylene, Unspecified (PP, Unspecified)
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 Stress, yld, Type I, 5 mm/min	33	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	30	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5.6	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	15	%	ASTM D638
Tensile Modulus, 5 mm/min	2020	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	47	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1760	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	31	MPa	ISO 527
Tensile Stress, break, 5 mm/min	29	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	13	%	ISO 527
Tensile Modulus, 1 mm/min	1660	MPa	ISO 527
Flexural Stress	44	MPa	ISO 178
Flexural Modulus, 2 mm/min	1690	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	348	J/m	ASTM D4812
Izod Impact, notched, 23°C	44	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	6	J	ASTM D3763

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 +23°C	22	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	119	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	65	°C	ASTM D648
CTE, -30°C to 30°C, flow	9.1E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	3.98E-03	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	105	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	60	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Density	1.03	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.02	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	2 – 4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	2 – 4	%	ASTM D955
Wear Factor Washer	172	10 ⁻¹⁰ in ⁴ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	6	10 ⁻¹⁰ in ⁴ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.76	-	ASTM D3702 Modified: Manual
Static COF	0.62	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.02	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	225 – 250	°C	
Front - Zone 3 Temperature	240 – 250	°C	
Middle - Zone 2 Temperature	215 – 225	°C	
Rear - Zone 1 Temperature	195 – 205	°C	
Mold Temperature	30 – 50	°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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