

LNPTM LUBRICOMPTM COMPOUND UL002S

UL-4020 HS

DESCRIPTION

LNP LUBRICOMP UL002S compound is based on Polyphthalamide (PPA) resin containing 10% PTFE. Added features of this grade include: Heat Stabilized, Wear Resistant.

GENERAL INFORMATION	
Features	Heat Stabilized, Wear resistant, High temperature resistance
Fillers	Unreinforced, PTFE
Polymer Types	Polyphthalamide (PPA)
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, yld, Type I, 5 mm/min	60	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.2	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.2	%	ASTM D638
Tensile Modulus, 50 mm/min	3170	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	105	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	105	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2980	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	58	MPa	ISO 527
Tensile Stress, break, 5 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.1	%	ISO 527
Tensile Strain, break, 5 mm/min	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	3210	MPa	ISO 527
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	453	J/m	ASTM D4812
Izod Impact, notched, 23°C	26	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	2	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	27	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	2	kJ/m ²	ISO 180/1A
PHYSICAL ⁽¹⁾			
Density	1.25	g/cm ³	ASTM D792

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Moisture Absorption, (23°C/50% RH/24 hrs)	0.47	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.9 – 2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.7 – 0.9	%	ASTM D955
Wear Factor Washer	20	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	-1	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.26	-	ASTM D3702 Modified: Manual
Static COF	0.16	-	ASTM D3702 Modified: Manual
Density	1.26	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.73	%	ISO 62
FLAME CHARACTERISTICS ⁽³⁾			
UL Yellow Card Link	E207780-103093685	-	-
UL Recognized, 94V-2 Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15	%	
Melt Temperature	315 – 330	°C	
Front - Zone 3 Temperature	325 – 340	°C	
Middle - Zone 2 Temperature	315 – 325	°C	
Rear - Zone 1 Temperature	310 – 320	°C	
Mold Temperature	150 – 170	°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) 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.
- (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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