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# **LNP™ LUBRICOMP™ Compound AL003**

Americas: COMMERCIAL

Also known as: LNP™ LUBRICOMP™ Compound AL-4030

Product reorder name: AL003

LNP™ LUBRICOMP™ AL003 is a compound based on Acrylonitrile Butadiene Styrene resin containing 15% PTFE. Added feature of this material is: Wear Resistant.

YPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yield	360	kgf/cm²	ASTM D 638
Tensile Stress, break	330	kgf/cm²	ASTM D 638
Tensile Strain, yield	2.3	%	ASTM D 638
Tensile Strain, break	14.7	%	ASTM D 638
Tensile Modulus, 50 mm/min	24600	kgf/cm²	ASTM D 638
Flexural Stress	630	kgf/cm²	ASTM D 790
Flexural Modulus	21000	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, yield	35	MPa	ISO 527
Tensile Stress, break	32	MPa	ISO 527
Tensile Strain, yield	2.7	%	ISO 527
Tensile Strain, break	11.6	%	ISO 527
Tensile Modulus, 1 mm/min	2280	MPa	ISO 527
Flexural Stress	61	MPa	ISO 178
Flexural Modulus	2000	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	20	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	116	cm-kgf	ASTM D 3763
Multiaxial Impact	83	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	21	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	77	°C	ASTM D 648

#### Source GMD, last updated:

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<sup>(1)</sup> Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

<sup>(2)</sup> Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire

<sup>(3)</sup> Tills lating is not minimized according to UL standards.
(4) Internal measurements according to UL standards.
(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to (5) Measurements in according to the standards. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.
(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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YPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
THERMAL			
CTE, -40°C to 40°C, flow	9.54E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.36E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	9.57E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.5E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	81	°C	ISO 75/Af
PHYSICAL			
Density	1.13	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.2	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.6 - 0.8	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.8 - 1	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.6 - 0.8	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	0.8 - 1	%	ISO 294
Wear Factor Washer	100	10^-10 in^5-min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.22	-	ASTM D 3702 Modified
Static COF	0.11	-	ASTM D 3702 Modified
Density	1.13	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.31	%	ISO 62

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(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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ROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.05 - 0.1	%
Melt Temperature	260	°C
Front - Zone 3 Temperature	265 - 275	°C
Middle - Zone 2 Temperature	230 - 245	°C
Rear - Zone 1 Temperature	205 - 215	°C
Mold Temperature	70 - 80	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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