

# LNPTM LUBRILOYTM COMPOUND K2000XXH

## K

### DESCRIPTION

LNP LUBRILOY K2000XXH compound is based on Acetal (POM) resin containing proprietary lubricant. Added features of this grade include: Wear Resistant, Healthcare.

GENERAL INFORMATION	
Features	Wear resistant, Healthcare/Formula lock, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Acetal (POM) Copolymer
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging

### TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL <sup>(1)</sup>			
Tensile Stress, yield	55	MPa	ASTM D638
Tensile Stress, break	51	MPa	ASTM D638
Tensile Strain, yield	9.3	%	ASTM D638
Tensile Strain, break	32.4	%	ASTM D638
Tensile Modulus, 50 mm/min	2060	MPa	ASTM D638
Flexural Stress	84	MPa	ASTM D790
Flexural Modulus	2420	MPa	ASTM D790
Tensile Stress, yield	60	MPa	ISO 527
Tensile Stress, break	59	MPa	ISO 527
Tensile Strain, yield	9	%	ISO 527
Tensile Strain, break	13.3	%	ISO 527
Tensile Modulus, 1 mm/min	2560	MPa	ISO 527
Flexural Stress	65	MPa	ISO 178
Flexural Modulus	2420	MPa	ISO 178
IMPACT <sup>(1)</sup>			
Izod Impact, unnotched, 23°C	1356	J/m	ASTM D4812
Izod Impact, notched, 23°C	69	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	6	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	48	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL <sup>(1)</sup>			
HDT, 0.45 MPa, 3.2 mm, unannealed	158	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	110	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.15E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.11E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.15E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.11E-04	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	87	°C	ISO 75/Af
PHYSICAL <sup>(1)</sup>			
Density	1.4	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.33	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	2.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	2.3	%	ASTM D955
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	2.21	%	ISO 294
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	2.14	%	ISO 294
Wear Factor Washer	10	10 <sup>-4</sup> in <sup>3</sup> /ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.38	-	ASTM D3702 Modified: Manual
Static COF	0.24	-	ASTM D3702 Modified: Manual
Density	1.4	g/cm <sup>3</sup>	ISO 1183
INJECTION MOLDING <sup>(3)</sup>			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	200 – 215	°C	
Front - Zone 3 Temperature	210 – 220	°C	
Middle - Zone 2 Temperature	195 – 205	°C	
Rear - Zone 1 Temperature	175 – 190	°C	
Mold Temperature	80 – 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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