

LNPT[™] LUBRICOMP[™] COMPOUND EX03599H

FORMERLY KNOWN AS "PDX-E-03599 EES HC"

DESCRIPTION

LNP LUBRICOMP EX03599H compound is based on Polyetherimide (PEI) resin containing proprietary fillers. Added features of this grade include: Healthcare, Wear Resistant.

GENERAL INFORMATION

Features	Wear resistant, Healthcare/Formula lock, High temperature resistance
Fillers	Unreinforced
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

INDUSTRY

Hygiene and Healthcare
Packaging

SUB INDUSTRY

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

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yield	105	MPa	ASTM D638
Tensile Stress, break	88	MPa	ASTM D638
Tensile Strain, yield	7	%	ASTM D638
Tensile Strain, break	27.5	%	ASTM D638
Tensile Modulus, 50 mm/min	3330	MPa	ASTM D638
Flexural Modulus	3480	MPa	ASTM D790
Tensile Stress, yield	106	MPa	ISO 527
Tensile Stress, break	98	MPa	ISO 527
Tensile Strain, yield	6.8	%	ISO 527
Tensile Strain, break	9.7	%	ISO 527
Tensile Modulus, 1 mm/min	3180	MPa	ISO 527
Flexural Stress	112	MPa	ISO 178
Flexural Modulus	3140	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	1377	J/m	ASTM D4812
Izod Impact, notched, 23°C	48	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	6	J	ASTM D3763
Multiaxial Impact	2	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	89	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	5	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 3.2mm, unannealed	190	°C	ASTM D648

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CHEMISTRY THAT MATTERS[™]

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	4.32E-05	1 / °C	ASTM E831
CTE, -40°C to 40°C, xflow	4.14E-05	1 / °C	ASTM E831
CTE, -40°C to 40°C, flow	4.39E-05	1 / °C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.19E-05	1 / °C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	187	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Density	1.28	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.1	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.7	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.8	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.72	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.78	%	ISO 294
Dynamic COF	0.43	-	ASTM D3702 Modified: Manual
Static COF	0.45	-	ASTM D3702 Modified: Manual
Density	1.28	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.25	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	360 – 400	°C	
Rear - Zone 1 Temperature	360 – 380	°C	
Middle - Zone 2 Temperature	370 – 390	°C	
Front - Zone 3 Temperature	380 – 400	°C	
Nozzle Temperature	390 – 400	°C	
Mold Temperature	140 – 180	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw speed (Circumferential speed)	0.2 – 0.3	m/s	
Vent Depth	0.025 – 0.076	mm	

(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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