

LNPT[™] LUBRICOMP[™] COMPOUND DX19519H

DESCRIPTION

LNP LUBRICOMP DX19519H compound is based on Polycarbonate (PC) copolymer resin containing proprietary fillers. Added features of this grade include: Healthcare, Wear Resistant.

GENERAL INFORMATION

Features	Wear resistant, Healthcare/Formula lock
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
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 Modulus, 50 mm/min	2135	MPa	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	57.65	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	45.85	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	45.86	%	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5.97	%	ASTM D638
Tensile Stress, yield, 50 mm/min	57.69	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45.24	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.9	%	ISO 527
Tensile Strain, break, 50 mm/min	45.24	%	ISO 527
Flexural Modulus, 1.3 mm/min, 50 mm span	2085	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	79	MPa	ASTM D790
Tensile Modulus, 1 mm/min	2091.4	MPa	ISO 527
Flexural Modulus, 2 mm/min	2160	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, -30°C	156	J/m	ASTM D256
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	223.51	kJ/m ²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	43.79	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	16.86	kJ/m ²	ISO 179/1eA
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	304.27	kJ/m ²	ISO 179/1eU
Izod Impact, notched 80*10*4 -30°C	16.09	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 -30°C	28.62	kJ/m ²	ISO 180/1U
Izod Impact, notched, 23°C	614	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	168.55	kJ/m ²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	44.75	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
CTE, -40°C to 95°C, flow	7.53E-05	1/°C	ASTM E831
CTE, -40°C to 95°C, xflow	7.51E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	8.08E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.95E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	145.95	°C	ISO 306
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	119.8	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Melt Flow Rate, 300°C/ 1.2 kgf	27.7	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/ 1.2 kg	24.5	cm ³ /10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/ 1.2 kg	24.19	cm ³ /10 min	ISO 1133
Water Absorption, (23°C/24hrs)	0.07	%	ISO 62-1
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.83	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.94	%	ASTM D955
Wear Factor Washer	211.5	10 ⁻¹⁰ in ⁴ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.3495	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.28	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Nozzle Temperature	290 – 310	°C	
Vent Depth	0.025 – 0.076	mm	
Drying Temperature	120	°C	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	270 – 295	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	

(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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