

LNPT[™] LUBRICOMP[™] COMPOUND DFL34H

DFL-4034

DESCRIPTION

LNP LUBRICOMP DFL34H is a compound based on Polycarbonate (PC) resin containing 20% glass fiber, 15% PTFE. Added features of this material include: Internally Lubricated, Healthcare.

GENERAL INFORMATION	
Features	Wear resistant, Healthcare/Formula lock
Fillers	Glass Fiber, PTFE
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

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

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	97	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	95	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.8	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.3	%	ASTM D638
Tensile Modulus, 5 mm/min	6860	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	144	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4910	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	2	MPa	ISO 527
Tensile Stress, break, 5 mm/min	89	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.9	%	ISO 527
Tensile Strain, break, 5 mm/min	3.5	%	ISO 527
Tensile Modulus, 1 mm/min	6500	MPa	ISO 527
Flexural Strength, 2 mm/min	153	MPa	ISO 178
Flexural Modulus, 2 mm/min	6010	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	780	J/m	ASTM D4812
Izod Impact, notched, 23°C	169	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	22	J	ASTM D3763
Multiaxial Impact	7	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	47	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	15	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	147	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	143	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.6E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	2.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.6E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	147	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	144	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.46	-	ASTM D792
Density	1.46	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.11	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.3 – 0.6	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.2 – 0.4	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.3 – 0.5	%	ISO 294
Wear Factor Washer	76	10 ⁻¹⁰ in ⁴ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.52	-	ASTM D3702 Modified: Manual
Static COF	0.67	-	ASTM D3702 Modified: Manual
Density	1.46	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.16	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°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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