LNP™ LUBRILOY™ Compound DF206XXH

DF-30 HC

DESCRIPTION

LNP LUBRILOY DF206XXH compound is based on Polycarbonate (PC) resin containing 30% glass fiber and a proprietary lubricant. Added features of this grade include: Wear Resistant, Healthcare.

GENERAL INFORMATION	
Features	Wear resistant, Healthcare/Formula lock, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polycarbonate (PC)
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 [1]			
Tensile Stress, break, 5 mm/min	112	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Modulus, 1 mm/min	8240	MPa	ISO 527
Flexural Strength, 2 mm/min	166	MPa	ISO 178
Flexural Modulus, 2 mm/min	7580	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	112	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Modulus, 5 mm/min	8720	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	174	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	7830	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	17	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	49	kJ/m²	ISO 180/1U
Multiaxial Impact	6	J	ISO 6603
Izod Impact, notched, 23°C	178	J/m	ASTM D256
Izod Impact, unnotched, 23°C	775	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	26	J	ASTM D3763
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	141	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	145	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	142	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	146	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	5.10E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	5.60E-05	1/°C	ASTM D696
PHYSICAL [1]			
Moisture Absorption (23°C / 50% RH)	0.16	%	ISO 62
Specific Gravity	1.4	-	ASTM D792
Density	1.39	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.11	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.4 – 0.6	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.5 – 0.7	%	ASTM D955
Wear Factor Washer	245	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	27	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.49	-	ASTM D3702 Modified: Manual
Static COF	0.64	-	ASTM D3702 Modified: Manual
INJECTION MOLDING [3]			
Drying Temperature	100	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 315	°C	
Front - Zone 3 Temperature	280 – 310	°C	
Middle - Zone 2 Temperature	280 – 300	°C	
Rear - Zone 1 Temperature	275 – 300	°C	
Mold Temperature	65 – 95	°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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