LNP™ LUBRICOMP™ COMPOUND WBL36L

WBL-4036 LE
REGION ASIA

DESCRIPTION

LNP LUBRICOMP WBL36L compound is based on Polybutylene Terephthalate (PBT) resin containing 30% glass bead, 15% PTFE. Added features of this grade include: Wear Resistant, Low Extractables.

GENERAL INFORMATION	
Features	Low Warpage, Wear resistant, Food contact, Dimensional stability
Fillers	Glass Bead, PTFE
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Consumer	Home Appliances
Packaging	Industrial Packaging, Food & Beverage

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	37	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	36	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.2	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.1	%	ASTM D638
Tensile Modulus, 50 mm/min	4130	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	74	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3900	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	37	MPa	ISO 527
Tensile Stress, break, 5 mm/min	36	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.4	%	ISO 527
Tensile Strain, break, 5 mm/min	3.4	%	ISO 527
Tensile Modulus, 1 mm/min	4020	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	75	MPa	ISO 178
Flexural Modulus, 2 mm/min	4140	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	256	J/m	ASTM D4812
Izod Impact, notched, 23°C	32	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	3	J	ASTM D3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	18	kJ/m²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	188	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	95	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.38E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.02E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.4E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.1E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	7.4E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	7.1E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	184	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	94	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.69	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.04	%	ASTM D570
Mold Shrinkage, flow [2]	2.4	%	SABIC method
Mold Shrinkage, xflow [2]	1.9	%	SABIC method
Mold Shrinkage, flow, 24 hrs [2]	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1.7 – 2	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	2.4	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	1.9	%	ISO 294
Wear Factor Washer	25	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.66	-	ASTM D3702 Modified: Manual
Static COF	0.63	-	ASTM D3702 Modified: Manual
Density	1.69	g/cm³	ISO 1183
INJECTION MOLDING [3]			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	240 – 250	°C	
Front - Zone 3 Temperature	250 – 260	°C	
Middle - Zone 2 Temperature	240 – 250	°C	
Rear - Zone 1 Temperature	220 – 230	°C	
Mold Temperature	80 – 100	°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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