

LNPT[™] LUBRICOMP[™] COMPOUND WL0049

DESCRIPTION

LNP LUBRICOMP WL0049 compound is based on Polybutylene Terephthalate (PBT) resin containing 20% PTFE. Added features of this grade include: Wear Resistant and Flame Retardant.

GENERAL INFORMATION

Features	Flame Retardant, Wear resistant
Fillers	PTFE
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

INDUSTRY

Building and Construction
Consumer
Electrical and Electronics
Industrial

SUB INDUSTRY

Building Component
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Mobile Phone - Computer - Tablets
Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Flexural Strength, 1.3 mm/min, 50 mm span	74	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2500	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	42	MPa	ISO 527
Tensile Stress, break, 5 mm/min	42	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Strength, 2 mm/min	71	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	293	J/m	ASTM D4812
Izod Impact, notched, 23°C	35	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	3	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	2	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	134	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	91	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.05E-04	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	9.5E-05	1/°C	ASTM D696

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	134	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	63	°C	ISO 75/Af
CTE, 23°C to 60°C, xflow	1.01E-04	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	1.09E-04	1/°C	ISO 11359-2
Relative Temp Index, Elec ⁽²⁾	75	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	75	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	75	°C	UL 746B
PHYSICAL ⁽¹⁾			
Specific Gravity	1.51	-	ASTM D792
Density	1.51	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.05	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	1 – 3	%	ASTM D955
Wear Factor Washer	2	10 ⁻⁴ in ³ /ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	-1	10 ⁻⁴ in ³ /ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.21	-	ASTM D3702 Modified: Manual
Static COF	0.11	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E121562-101282606	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥0.2	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	245 – 260	°C	
Front - Zone 3 Temperature	250 – 260	°C	
Middle - Zone 2 Temperature	245 – 255	°C	
Rear - Zone 1 Temperature	230 – 245	°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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) 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.

(4) 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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