LNP™ LUBRICOMP™ COMPOUND WCL36

WCL-4036

DESCRIPTION

LNP LUBRICOMP WCL36 is a compound based on PBT resin containing 30% Carbon Fiber, 15% PTFE. Added features of this grade include: Electrically Conductive, Wear Resistant.

TYPICAL PROPERTY VALUES

Revision 20191218

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	125	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	125	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1	%	ASTM D 638
Tensile Modulus, 50 mm/min	23380	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	173	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	175	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	14900	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	130	MPa	ISO 527
Tensile Stress, break, 5 mm/min	121	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1	%	ISO 527
Tensile Strain, break, 5 mm/min	1	%	ISO 527
Tensile Modulus, 1 mm/min	20640	MPa	ISO 527
Flexural Stress	187	MPa	ISO 178
Flexural Modulus, 2 mm/min	18060	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	390	J/m	ASTM D 4812
Izod Impact, notched, 23°C	36	J/m	ASTM D 256
Multiaxial Impact	1	J	ISO 6603
Instrumented Impact Total Energy, 23°C	6	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	24	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	222	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	210	°C	ASTM D 648
CTE, -30°C to 30°C, flow	1.3E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	3.6E-05	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	223	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	210	°C	ISO 75/Af
PHYSICAL			
Density	1.51	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.03	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.2 – 0.4	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	1 – 3	%	ASTM D 955

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Wear Factor Washer	25	10^-10 in^5-min/ft-lb-hr	ASTM D 3702 Modified: Manual
Wear Factor Ring	2.5 – 3	10^-10 in^5-min/ft-lb-hr	ASTM D 3702 Modified: Manual
Dynamic COF	0.34	-	ASTM D 3702 Modified: Manual
Static COF	0.3	-	ASTM D 3702 Modified: Manual
Density	1.51	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	240 – 265	°C	
Front - Zone 3 Temperature	260 – 270	°C	
Middle - Zone 2 Temperature	245 – 255	°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	

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