

LNPTM LUBRICOMPTM COMPOUND 5CL23

FP-VCL-4023

DESCRIPTION

LNP LUBRICOMP 5CL23 compound is based on Polyvinylidene Fluoride (PVDF) resin containing 15% carbon fiber, 10% PTFE. Added features of this grade include: Wear Resistant, Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Wear resistant, High stiffness/Strength
Fillers	Carbon Fiber, PTFE
Polymer Types	Polyvinylidene Fluoride (PVDF)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Energy Management, Electronic Components
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, brk, Type I, 5 mm/min	84	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	0.8	%	ASTM D638
Tensile Modulus, 5 mm/min	15780	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	108	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	12500	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	77	MPa	ISO 527
Tensile Strain, break, 5 mm/min	0.7	%	ISO 527
Tensile Modulus, 1 mm/min	14460	MPa	ISO 527
Flexural Stress	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	11870	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	201	J/m	ASTM D4812
Izod Impact, notched, 23°C	55	J/m	ASTM D256
Multiaxial Impact	3	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	13	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	13	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	168	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	164	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.1E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.4E-05	1/°C	ASTM D696

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	166	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	158	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.84	-	ASTM D792
Density	1.84	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.03	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	1 – 3	%	ASTM D955
Wear Factor Washer	5	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	0	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.53	-	ASTM D3702 Modified: Manual
Static COF	0.44	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Temperature	120 – 150	°C	
Drying Time	4	Hrs	
Melt Temperature	215 – 230	°C	
Front - Zone 3 Temperature	225 – 245	°C	
Middle - Zone 2 Temperature	210 – 225	°C	
Rear - Zone 1 Temperature	190 – 210	°C	
Mold Temperature	65 – 90	°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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