

LNPT[™] THERMOCOMP[™] COMPOUND 2X98703

PDX-FP-E-98703

DESCRIPTION

LNP THERMOCOMP 2X98703 compound is based on Ethylene Tetrafluoroethylene (ETFE) resin containing 20% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION

Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength
Fillers	Carbon Fiber
Polymer Types	Ethylene Tetrafluoroethylene Copolymer (ETFE)
Processing Techniques	Injection Molding

INDUSTRY

Electrical and Electronics
Industrial

SUB INDUSTRY

Energy Management, Electronic Components
Material Handling

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	101	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	98	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5,6	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	5,9	%	ASTM D638
Tensile Modulus, 5 mm/min	14180	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	143	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	10600	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	95	MPa	ISO 527
Tensile Stress, break, 5 mm/min	88	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	5,5	%	ISO 527
Tensile Modulus, 1 mm/min	11220	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	135	MPa	ISO 178
Flexural Modulus, 2 mm/min	10440	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	481	J/m	ASTM D4812
Izod Impact, notched, 23°C	411	J/m	ASTM D256
Multiaxial Impact	8	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	20	J	ASTM D3763
Izod Impact, unnotched 80°10°4 +23°C	88	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	34	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			

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CHEMISTRY THAT MATTERS[™]

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	248	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	214	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.7E-05	1 / °C	ASTM E831
CTE, -40°C to 40°C, xflow	7.2E-05	1 / °C	ASTM E831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	239	°C	ISO 75 /Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	187	°C	ISO 75 /Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.73	-	ASTM D792
Density	1.73	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/ 24 hrs)	0.01	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	1	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
INJECTION MOLDING ⁽³⁾			
Drying Temperature	120 – 150	°C	
Drying Time	4	Hrs	
Melt Temperature	315	°C	
Front - Zone 3 Temperature	325 – 340	°C	
Middle - Zone 2 Temperature	300 – 325	°C	
Rear - Zone 1 Temperature	280 – 300	°C	
Mold Temperature	90 – 120	°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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