LNP™ THERMOCOMP™ COMPOUND MX89510

PDX-M-89510

DESCRIPTION

LNP THERMOCOMP MX89510 compound is based on Polypropylene (PP) resin containing 10% glass fiber, 10% glass bead.

GENERAL INFORMATION	
Features	Low Warpage, High stiffness/Strength
Fillers	Glass Fiber, Glass Bead
Polymer Types	Polypropylene, Unspecified (PP, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Sport/Leisure, Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	52	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	52	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.4	%	ASTM D638
Tensile Modulus, 50 mm/min	3820	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	80	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2800	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	50	MPa	ISO 527
Tensile Stress, break, 5 mm/min	48	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.9	%	ISO 527
Tensile Strain, break, 5 mm/min	3.4	%	ISO 527
Tensile Modulus, 1 mm/min	3540	MPa	ISO 527
Flexural Stress	76	MPa	ISO 178
Flexural Modulus, 2 mm/min	2950	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	368	J/m	ASTM D4812
Izod Impact, notched, 23°C	21	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	4	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	22	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	2	kJ/m²	ISO 180/1A
THERMAL [1]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	156	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	131	°C	ASTM D648
CTE, -30°C to 30°C, flow	4.3E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	1.2E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	153	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	119	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.02	-	ASTM D792
Density	1.01	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.02	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.8 – 2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.9 – 3	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.02	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	225 – 250	°C	
Front - Zone 3 Temperature	240 – 250	°C	
Middle - Zone 2 Temperature	215 – 225	°C	
Rear - Zone 1 Temperature	195 – 205	°C	
Mold Temperature	30 – 50	°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.

DISCLAIMER