LNP™ THERMOCOMP™ Compound WFB62

WF-1008 MG

DESCRIPTION

LNP THERMOCOMP WFB62 compound is based on Polybutylene Terephthalate (PBT) resin containing 10% glass fiber, 30% glass bead. Added features of this grade include: Low Warpage.

GENERAL INFORMATION	
Features	Low Warpage, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Bead, Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
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	77	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	76	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D638
Tensile Modulus, 5 mm/min	6060	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	130	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	128	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	5730	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	77	MPa	ISO 527
Tensile Stress, break, 5 mm/min	76	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	6150	MPa	ISO 527
Flexural Stress	126	MPa	ISO 178
Flexural Modulus, 2 mm/min	5670	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	277	J/m	ASTM D4812
Izod Impact, notched, 23°C	30	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	5	J	ASTM D3763

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 +23°C	17	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	216	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	185	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.1E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	5.9E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	207	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	167	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.6	-	ASTM D792
Density	1.6	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.03	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 3	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
INJECTION MOLDING [3]			
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	

(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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