LNP™ THERMOCOMP™ COMPOUND WC006

WC-1006
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP WC006 compound is based on Polybutylene Terephthalate (PBT) resin containing 30% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength, No PFAS intentionally added
Fillers	Carbon Fiber
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 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	158	MPa	ASTM D638
Tensile Stress, break	158	MPa	ASTM D638
Tensile Strain, yield	1.2	%	ASTM D638
Tensile Strain, break	1.2	%	ASTM D638
Tensile Modulus, 50 mm/min	19990	MPa	ASTM D638
Flexural Stress	206	MPa	ASTM D790
Flexural modulus	15160	MPa	ASTM D790
Tensile Stress, yield	158	MPa	ISO 527
Tensile Stress, break	158	MPa	ISO 527
Tensile Strain, yield	1.2	%	ISO 527
Tensile Strain, break	1.2	%	ISO 527
Tensile Modulus, 1 mm/min	20660	MPa	ISO 527
Flexural Stress	219	MPa	ISO 178
Flexural Modulus	17000	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	464	J/m	ASTM D4812
Izod Impact, notched, 23°C	42	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	8	J	ASTM D3763
Multiaxial Impact	2	J	ISO 6603

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	222	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	211	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ISO 11359-2
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	209	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.43	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [2]	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 2	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	0.23	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	1.2	%	ISO 294
Density	1.43	g/cm³	ISO 1183
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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

DISCLAIMER