LNP™ THERMOCOMP™ Compound WFC061I

DESCRIPTION

LNP THERMOCOMP COMPOUND WFC061I is a compound based on Polybutylene terephthalate (PBT) containing Glass Fiber. Added features of this material include Chemical Resistance, Enhanced Dimensional Stability, Low Warpage, laser weldable, Non Cl/Br flame retardant.

GENERAL INFORMATION	
Features	Chemical Resistance, Low Warpage, Non Cl/Br flame retardant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Exteriors
Electrical and Electronics	Electronic Components

TYPICAL PROPERTY VALUES

Revision 20250916

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	130	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.2	%	ASTM D638
Tensile Modulus, 5 mm/min	11100	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	200	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	10500	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	125	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.1	%	ISO 527
Tensile Modulus, 1 mm/min	11250	MPa	ISO 527
Flexural Strength, 2 mm/min	200	MPa	ISO 178
Flexural Modulus, 2 mm/min	10380	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, -20°C	95	J/m	ASTM D256
Izod Impact, notched, 23°C	100	J/m	ASTM D256
Izod Impact, unnotched, 23°C	495	J/m	ASTM D4812
Izod Impact, notched 80*10*4 -40°C	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	46	kJ/m²	ISO 180/1U
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	208	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	108	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	208	°C	ISO 75/Bf

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	125	°C	ISO 75/Af
CTE			
-40°C to 40°C, flow	2.0E-05	1/°C	ASTM E831
-40°C to 40°C, xflow	5.0E-05	1/°C	ASTM E831
-40°C to 80°C, flow	2.0E-05	1/°C	ISO 11359-2
-40°C to 80°C, xflow	7.5E-05	1/°C	ISO 11359-2
PHYSICAL (1)			
Specific Gravity	1.5	-	ASTM D792
Density	1.5	g/cm³	ISO 1183
Melt Volume Rate, MVR at 260°C/2.16 kg	20	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	32	cm³/10 min	ISO 1133
Water Absorption, (23°C/24hrs)	0.02	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.02	%	ISO 62-1
Mold Shrinkage, flow (2)	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow (2)	0.4 – 0.55	%	SABIC method
INJECTION MOLDING (3)			
Drying Temperature	110 – 120	°C	
Drying Time	3 – 4	Hrs	
Melt Temperature	260 – 290	°C	
Nozzle Temperature	265 – 295	°C	
Front - Zone 3 Temperature	260 – 290	°C	
Middle - Zone 2 Temperature	260 – 290	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Mold Temperature	50 – 110	°C	

(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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