LNP™ THERMOCOMP™ Compound WFC06I

DESCRIPTION

LNP THERMOCOMP COMPOUND WFC06I is a compound based on Polybutylene terephthalate (PBT) containing Glass Fiber. Added features of this material include Chemical Resistance, Enhanced Dimensional Stability, Low Warpage, Dielectrics, laser weldable.

GENERAL INFORMATION	
Features	Chemical Resistance, Low Warpage, Dielectrics, Dimensional stability, 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 Interiors
Consumer	Home Appliances, Commercial Appliance
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20261012

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	2.6	%	ASTM D638
Tensile Modulus, 5 mm/min	9300	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	8720	MPa	ASTM D790
IMPACT [1]			
Izod impact, notched			
-20°C	120	J/m	ASTM D256
23°C	140	J/m	ASTM D256
Izod Impact, Unnotched			
23°C	990	J/m	ASTM D4812
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	13	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	62	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	200	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D648
CTE			
23°C to 80°C, flow	2.3E-05	1/°C	ASTM E831
23°C to 80°C, xflow	6.4E-05	1/°C	ASTM E831
PHYSICAL [1]			
Specific Gravity	1.5	-	ASTM D792
Melt Volume Rate, MVR at 260°C/5.0 kg	22	cm³/10 min	ISO 1133

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow [2]	0.05 – 0.15	%	SABIC method
Mold Shrinkage, xflow [2]	0.1 – 0.2	%	SABIC method
ELECTRICAL [1]			
Dielectric Constant			
1.1 GHz	3.7	-	SABIC method
1.9 GHz	3.7	-	SABIC method
5 GHz	3.6	-	SABIC method
10 GHz	3.6	-	SABIC method
20 GHz	3.6	-	SABIC method
77 GHz	3.5	-	SABIC method
Dissipation Factor			
1.1 GHz	0.008	-	SABIC method
1.9 GHz	0.008	-	SABIC method
5 GHz	0.007	-	SABIC method
10 GHz	0.007	-	SABIC method
20 GHz	0.008	-	SABIC method
77 GHz	0.009	-	SABIC method
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E207780-104566644	-	-
UL Recognized, 94HB Flame Class Rating	≥1.0	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	120	°C	
Drying Time	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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(4) 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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