LNP™ THERMOCOMP™ Compound ZF004

ZF-1004
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP ZF004 compound is based on Polyphenylene Ether / Polystyrene (PPE/PS) blend containing 20% glass fiber.

GENERAL INFORMATION	
Features	High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
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 20240711

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	80	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.8	%	ASTM D638
Tensile Modulus, 50 mm/min	6570	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	118	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6410	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	79	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	6350	MPa	ISO 527
Flexural Stress	121	MPa	ISO 178
Flexural Modulus, 2 mm/min	6270	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	390	J/m	ASTM D4812
Izod Impact, notched, 23°C	69	J/m	ASTM D256
Multiaxial Impact	2	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	12	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	31	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	138	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	131	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, flow	5.40E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.80E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	137	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	133	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.22	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.09	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.3 – 0.5	%	ASTM D955
Density	1.22	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Melt Temperature	300 – 305	°C	
Front - Zone 3 Temperature	300 – 310	°C	
Middle - Zone 2 Temperature	290 – 300	°C	
Rear - Zone 1 Temperature	275 – 290	°C	
Mold Temperature	80 – 110	°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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