LNP™ THERMOCOMP™ Compound AF004

AF-1004

DESCRIPTION

LNP THERMOCOMP AF004 compound is based on Acrylonitrile Butadiene Styrene (ABS) resin 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	Acrylonitrile Butadiene Styrene (ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Building and Construction	Building Component, Water Management
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	78	MPa	ASTM D638
Tensile Strain, break	2.2	%	ASTM D638
Tensile Modulus, 5 mm/min	6170	MPa	ASTM D638
Flexural Stress	130	MPa	ASTM D790
Flexural Modulus	6150	MPa	ASTM D790
Tensile Stress, break	76	MPa	ISO 527
Tensile Strain, break	2	%	ISO 527
Tensile Modulus, 1 mm/min	6000	MPa	ISO 527
Flexural Stress	108	MPa	ISO 178
Flexural Modulus	5330	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	395	J/m	ASTM D4812
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	11	J	ASTM D3763
Multiaxial Impact	3	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	19	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	103	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	95	°C	ISO 75/Af

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	101	°C	ISO 75/Bf
Relative Temp Index, Elec [2]	60	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	60	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	60	°C	UL 746B
PHYSICAL [1]			
Density	1.19	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.24	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [3]	0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.4	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [3]	0.24	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [3]	0.4	%	ISO 294
Density	1.19	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.39	%	ISO 62
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101344693	-	-
UL Yellow Card Link 2	E45329-101344673	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05 – 0.1	%	
Melt Temperature	260	°C	
Front - Zone 3 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	230 – 245	°C	
Rear - Zone 1 Temperature	205 – 215	°C	
Mold Temperature	70 – 80	°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) 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.

(3) 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.

(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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