LNP™ THERMOCOMP™ Compound AF004L

AF-1004 LE

DESCRIPTION

LNP THERMOCOMP AF004L compound is based on Acrylonitrile Butadiene Styrene (ABS) resin containing 20% glass fiber. Added features of this grade include: Low Extractables.

GENERAL INFORMATION	
Features	Food contact, 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
Building and Construction	Water Management
Consumer	Home Appliances
Packaging	Industrial Packaging, Food & Beverage

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	72	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.1	%	ISO 527
Tensile Modulus, 1 mm/min	5660	MPa	ISO 527
Flexural Strength, 2 mm/min	107	MPa	ISO 178
Flexural Modulus, 2 mm/min	4920	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	77	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D638
Tensile Modulus, 5 mm/min	5940	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	112	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	5400	MPa	ASTM D790
IMPACT [1]			
Izod Impact, unnotched 80*10*4 +23°C	21	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Multiaxial Impact	3	J	ISO 6603
Izod Impact, notched, 23°C	84	J/m	ASTM D256
Izod Impact, unnotched, 23°C	369	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	11	J	ASTM D3763
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	103	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	98	°C	ISO 75/Af
HDT, 0.45 MPa, 3.2 mm, unannealed	104	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	99	°C	ASTM D648
CTE, -30°C to 30°C, flow	4.9E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.6E-05	1/°C	ASTM D696
PHYSICAL [1]			
Moisture Absorption (23°C / 50% RH)	0.28	%	ISO 62
Density	1.18	g/cm³	ASTM D792
Specific Gravity	1.18	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.23	%	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
INJECTION MOLDING [3]			
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) 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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