

# LNPT<sup>™</sup> THERMOCOMP<sup>™</sup> 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
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
<b>MECHANICAL <sup>(1)</sup></b>			
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
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched 80*10*4 +23°C	21	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m <sup>2</sup>	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
<b>THERMAL <sup>(1)</sup></b>			
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

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
<b>PHYSICAL <sup>(1)</sup></b>			
Moisture Absorption (23°C / 50% RH)	0.28	%	ISO 62
Density	1.18	g/cm <sup>3</sup>	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 <sup>(2)</sup>	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	0.3 – 0.5	%	ASTM D955
<b>INJECTION MOLDING <sup>(3)</sup></b>			
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.

## ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

## DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.