

# LNPT<sup>TM</sup> THERMOCOMP<sup>TM</sup> COMPOUND DF00A1P

## DESCRIPTION

LNP THERMOCOMP DF00A1P compound is based on Polycarbonate (PC) resin containing 50% glass fiber. Added features of this grade include: High Modulus, Low Warpage, Non-Brominated & Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Low Warpage, Non Cl/Br flame retardant, High stiffness/Strength, Impact resistant
Fillers	Glass Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

  

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL <sup>(1)</sup>			
Tensile Stress, brk, Type I, 5 mm/min	170	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.4	%	ASTM D638
Tensile Modulus, 5 mm/min	17000	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	171	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	14470	MPa	ASTM D790
Tensile Stress, break	126	MPa	ISO 527
Tensile Strain, break	1.4	%	ISO 527
Tensile Modulus, 1 mm/min	17400	MPa	ISO 527
Flexural Stress	168	MPa	ISO 178
Flexural Modulus	14180	MPa	ISO 178
IMPACT <sup>(1)</sup>			
Izod Impact, unnotched, 23°C	181	J/m	ASTM D4812
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	7	J	ASTM D3763
Multiaxial Impact	7	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	13	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
THERMAL <sup>(1)</sup>			
HDT, 0.45 MPa, 3.2 mm, unannealed	105	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.3E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	4.2E-05	1 / °C	ASTM E831
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	104	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	96	°C	ISO 75/Af
Relative Temp Index, Elec <sup>(2)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(2)</sup>	80	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(2)</sup>	80	°C	UL 746B
PHYSICAL <sup>(1)</sup>			
Density	1.68	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.3	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(3)</sup>	0.1 – 0.25	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(3)</sup>	0.12 – 0.28	%	ASTM D955
Melt Flow Rate, 300°C/2.16 kgf	21	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/2.16 kg	12	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS <sup>(2)</sup>			
UL Yellow Card Link	<a href="#">E207780-101282786</a>	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.8	mm	UL 94
INJECTION MOLDING <sup>(4)</sup>			
Drying Temperature	110	°C	
Drying Time	3 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	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.

## 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.