

# LNPT<sup>TM</sup> THERMOTUF<sup>TM</sup> COMPOUND D1000FRD

## DESCRIPTION

LNP THERMOTUF D1000FRD compound is based on Polycarbonate (PC) resin. Added features of this grade include: impact modified, good Low temperature ductility in combination with medium flow characteristics, excellent surface aesthetics, excellent knit line strength and excellent processability with opportunities for shorter IM cycle times compared to standard IM PC resins. This is a general purpose product available for wide range of opaque colors and may be an excellent candidate for a broad range of applications.

GENERAL INFORMATION	
Features	Good Processability, Aesthetics/Visual effects, Impact resistant, Low temperature impact, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
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

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	57	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	90	%	ASTM D638
Tensile Modulus, 50 mm/min	2200	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	85	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2100	MPa	ASTM D790
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched, 23°C	750	J/m	ASTM D256
Izod Impact, notched, -30°C	600	J/m	ASTM D256
<b>THERMAL <sup>(1)</sup></b>			
HDT, 1.82 MPa, 3.2mm, unannealed	117	°C	ASTM D648
Ball Pressure Test, 125°C +/- 2°C	pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/120	138	°C	ISO 306
<b>PHYSICAL <sup>(1)</sup></b>			
Specific Gravity	1.18	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(2)</sup>	0.4 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm <sup>(2)</sup>	0.4 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	14	g/10 min	ASTM D1238
Density	1.19	g/cm <sup>3</sup>	ISO 1183

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Water Absorption, (23°C/saturated)	0.12	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 300°C/ 1.2 kg	13	cm <sup>3</sup> /10 min	ISO 1133
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 – 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	270 – 295	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

- (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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