

# LNPT<sup>™</sup> THERMOCOMP<sup>™</sup> AM COMPOUND DF004XXAR1

## DESCRIPTION

LNP THERMOCOMP DF004XXAR1 compound is based on Polycarbonate (PC) resin containing 20% glass fiber for Large Format Additive Manufacturing (LFAM) applications. Added features of this grade include: Higher Strength, Higher Temperature Performance and Higher Throughput compared to ABS and PPE, as well as Excellent Ductility and Smooth Surface Finish.

## TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
<b>Tensile Stress, 5mm/min <sup>(1)</sup></b>			
XZ Orientation	87	MPa	ASTM D638 Modified
ZX Orientation	44	MPa	ASTM D638 Modified
<b>Tensile Strain, 5mm/min</b>			
XZ Orientation	3.3	%	ASTM D638 Modified
ZX Orientation	2.1	%	ASTM D638 Modified
<b>Tensile Stiffness, 5mm/min</b>			
XZ Orientation <sup>(2)</sup>	5.1	GPa	ASTM D638 Modified
ZX Orientation	2.8	GPa	ASTM D638 Modified
<b>Flexural Stress, 5mm/min</b>			
XZ Orientation	65	MPa	ASTM D790 Modified
ZX Orientation	139	MPa	ASTM D790 Modified
<b>THERMAL</b>			
HDT, 1.82 MPa, 3.2mm, annealed	139	°C	ASTM D648
<b>PHYSICAL</b>			
Specific Gravity	1.35	-	ASTM D792
<b>EXTRUSION</b>			
Extruder L/D	24	-	
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Barrel - Zone 1 Temperature	250 – 280	°C	
Barrel - Zone 2 Temperature	260 – 290	°C	
Barrel - Zone 3 Temperature	260 – 290	°C	
Barrel - Zone 4 Temperature	260 – 290	°C	
Nozzle Temperature	260 – 290	°C	
Melt Temperature	260 – 290	°C	
Bed Temperature	100 – 120	°C	
Extruder Pressure	<11	MPa	

- (1) Modified ASTM E8 used for tensile test samples
- (2) Tensile Stiffness (K) is structural property defined as the stress/strain in the linear region of the stress-strain curve. Value depends on the geometry/shape and boundary/surrounding conditions

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