

# LNPT<sup>™</sup> THERMOCOMP<sup>™</sup> AM COMPOUND AF004XXAR1

## DESCRIPTION

LNP THERMOCOMP AF004XXAR1 compound is based on Acrylonitrile Butadiene Styrene (ABS) resin containing 20% glass fiber for Large Format Additive Manufacturing (LFAM) applications. Added features of this grade include: Easy Processing, Low Warp and Good Print Surface quality, making them a good candidate material for a broad range of applications and tooling, including thermoforming and vacuum-forming.

## 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	63	MPa	ASTM D638 Modified
ZX ORIENTATION	21	MPa	ASTM D638 Modified
<b>Tensile Strain, 5mm/min</b>			
XZ ORIENTATION	1.8	%	ASTM D638 Modified
ZX ORIENTATION	1.0	%	ASTM D638 Modified
<b>Tensile Stiffness, 5mm/min</b>			
XZ ORIENTATION <sup>(2)</sup>	5.1	GPa	ASTM D638 Modified
ZX ORIENTATION	2.6	GPa	ASTM D638 Modified
<b>Flexural Stress, 5mm/min</b>			
XZ ORIENTATION	35	MPa	ASTM D790 Modified
ZX ORIENTATION	91	MPa	ASTM D790 Modified
<b>THERMAL</b>			
HDT, 1.82 MPa, 3.2mm, unannealed	103	°C	ASTM D648
<b>PHYSICAL</b>			
Specific Gravity	1.198	-	ASTM D792
<b>EXTRUSION</b>			
Extruder L/D	24	-	
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05 – 0.1	%	
Barrel - Zone 1 Temperature	190 – 230	°C	
Barrel - Zone 2 Temperature	200 – 240	°C	
Barrel - Zone 3 Temperature	210 – 250	°C	
Barrel - Zone 4 Temperature	220 – 260	°C	
Nozzle Temperature	210 – 250	°C	
Melt Temperature	220 – 260	°C	
Bed Temperature	100 – 120	°C	
Extruder Pressure	<13.5	MPa	

- (1) Modified ASTM E8 used for tensile test samples.
- (2) Tensile Stiffness (K) is a 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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