

# LNPT<sup>™</sup> THERMOCOMP<sup>™</sup> AM COMPOUND JC004XXAR1

## DESCRIPTION

LNPT THERMOCOMP AM JC004XXAR1 is a compound based on PESU (Polyethersulfone) resin containing 20% carbon fiber for Large Format Additive manufacturing (LFAM) applications needing an inherent FR, reinforcement, and a high heat amorphous solution.

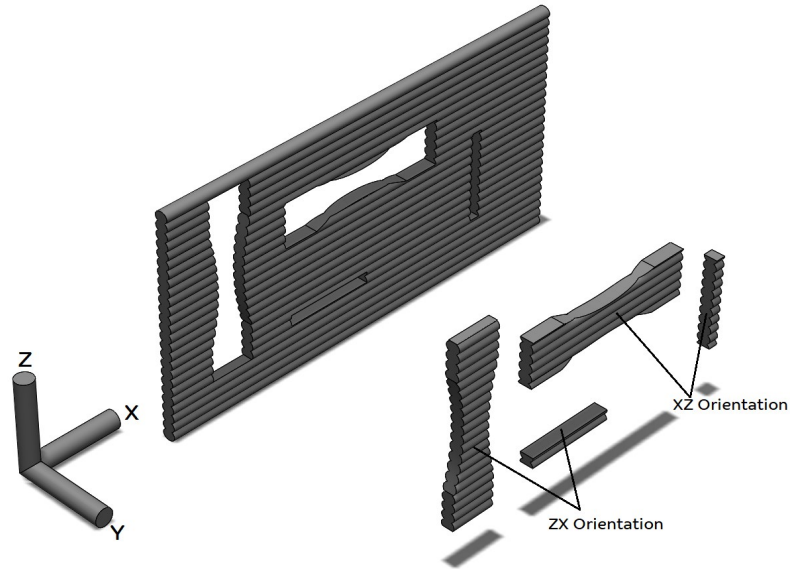
## TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
<b>Tensile Stress, 5mm/min <sup>(1)</sup></b>			
XZ Orientation	84	MPa	ASTM D638 Modified
ZX Orientation	23	MPa	ASTM D638 Modified
<b>Tensile Strain, 5mm/min</b>			
XZ Orientation	1.4	%	ASTM D638 Modified
ZX Orientation	1.2	%	ASTM D638 Modified
<b>Tensile Stiffness, 5mm/min</b>			
XZ Orientation <sup>(2)</sup>	7.8	GPa	ASTM D638 Modified
ZX Orientation	2.2	GPa	ASTM D638 Modified
<b>Flexural Stress, 5mm/min</b>			
XZ Orientation	37	MPa	ASTM D790 Modified
ZX Orientation	103	MPa	ASTM D790 Modified
<b>THERMAL</b>			
<b>HDT, 1.82 MPa, 3.2mm, annealed</b>	214	°C	ASTM D648
<b>PHYSICAL</b>			
<b>Specific Gravity</b>	1.43	-	ASTM D792
<b>EXTRUSION</b>			
<b>Extruder L/D</b>	24	-	
<b>Drying Temperature</b>	150	°C	
<b>Drying Time</b>	4 – 6	Hrs	
<b>Maximum Moisture Content</b>	0.02	%	
<b>Barrel - Zone 1 Temperature</b>	300 – 330	°C	
<b>Barrel - Zone 2 Temperature</b>	325 – 355	°C	
<b>Barrel - Zone 3 Temperature</b>	335 – 365	°C	
<b>Barrel - Zone 4 Temperature</b>	345 – 375	°C	
<b>Nozzle Temperature</b>	345 – 375	°C	
<b>Melt Temperature</b>	345 – 375	°C	
<b>Bed Temperature</b>	120 – 150	°C	
<b>Extruder Pressure</b>	<17	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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