

# LNP<sup>TM</sup> THERMOCOMP<sup>TM</sup> AM COMPOUND DC004XXAR1

REGION AMERICAS

## DESCRIPTION

LNP<sup>TM</sup> THERMOCOMP<sup>TM</sup> AM, grade name DC004XXAR1, is a compound based on PC resin containing 20% carbon fiber for Large Format Additive manufacturing (LFAM) applications needing higher stiffness vs glass fiber. PC based compounds deliver higher strength, higher temperature performance and higher throughput compared to ABS and PPE, as well as excellent ductility and smooth surface finish

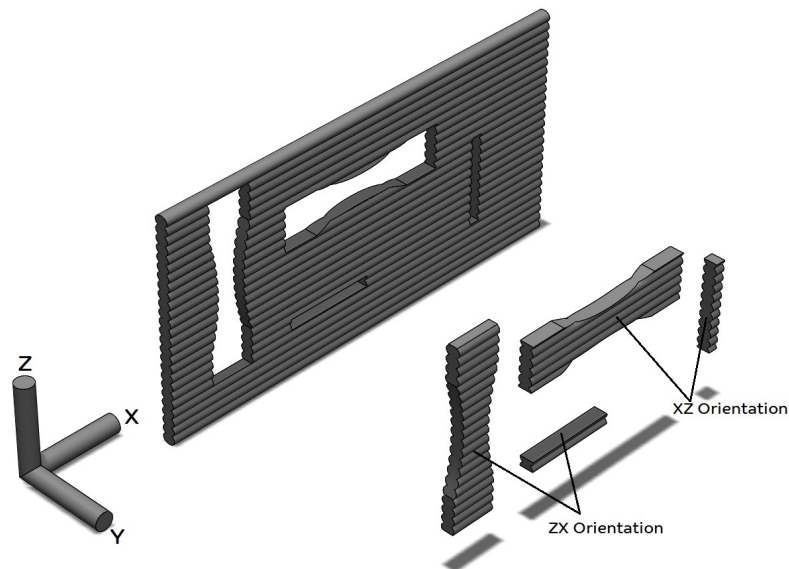
## TYPICAL PROPERTY VALUES

Revision 20190124

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
<b>Tensile Stress, 5mm/min<sup>(1)</sup></b>			
XZ Orientation	124	MPa	Modified ASTM D638
ZX Orientation	48	MPa	Modified ASTM D638
<b>Tensile Strain, 5mm/min</b>			
XZ Orientation	1.6	%	Modified ASTM D638
ZX Orientation	2.0	%	Modified ASTM D638
<b>Tensile Stiffness, 5mm/min</b>			
XZ Orientation <sup>(2)</sup>	11.5	GPa	Modified ASTM D638
ZX Orientation	3.0	GPa	Modified ASTM D638
<b>Flexural Stress, 5mm/min</b>			
XZ Orientation	66	MPa	Modified ASTM D790
ZX Orientation	164	MPa	Modified ASTM D790
<b>THERMAL</b>			
HDT, 1.82 MPa, 3.2mm, annealed	144	°C	ASTM D 648
<b>PHYSICAL</b>			
Specific Gravity	1.27	-	ASTM D 792
<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



## DISCLAIMER

Test specimens, except HDT, were taken from printed panels created via CI BAAM machine, Gen 2 extruder with heated Nozzle. BAAM is a trademark of Cincinnati Incorporated.

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