

# LNPTM THERMOCOMPTM AM COMPOUND DC004XXA11

## DESCRIPTION

LNP THERMOCOMP AM DC004XXA11 is a compound based on High Heat PC resin containing 20% carbon fiber for Large Format Additive manufacturing (LFAM) applications, including mid-temperature autoclaving tooling. This compound can offer higher temperature performance than standard PC and avoid some of the processing challenges associated with high temperature materials.

GENERAL INFORMATION	
Features	High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added, Additive Manufacturing
Brands	LNPTM THERMOCOMPTM
INDUSTRY	SUB INDUSTRY
Industrial	Industrial General

## 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	86	MPa	ASTM D638 Modified
ZX Orientation	19	MPa	ASTM D638 Modified
<b>Tensile Strain, 5mm/min</b>			
XZ Orientation	1.2	%	ASTM D638 Modified
ZX Orientation	1.2	%	ASTM D638 Modified
<b>Tensile Stiffness, 5mm/min</b>			
XZ Orientation <sup>(2)</sup>	8.5	GPa	ASTM D638 Modified
ZX Orientation	1.8	GPa	ASTM D638 Modified
<b>Flexural Stress, 5mm/min</b>			
XZ Orientation	28	MPa	ASTM D790 Modified
ZX Orientation	109	MPa	ASTM D790 Modified
<b>THERMAL</b>			
<b>HDT, 1.82 MPa, 3.2mm, annealed</b>	181	°C	ASTM D648
<b>PHYSICAL</b>			
<b>Specific Gravity</b>	1.29	-	ASTM D792
<b>EXTRUSION</b>			
<b>Extruder L/D</b>	24	-	
<b>Drying Temperature</b>	135	°C	
<b>Drying Time</b>	4 – 6	Hrs	
<b>Drying Time (Cumulative)</b>	48	Hrs	
<b>Maximum Moisture Content</b>	0.02	%	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Barrel - Zone 1 Temperature	285 – 315	°C	
Barrel - Zone 2 Temperature	305 – 335	°C	
Barrel - Zone 3 Temperature	315 – 345	°C	
Barrel - Zone 4 Temperature	325 – 355	°C	
Nozzle Temperature	320 – 350	°C	
Melt Temperature	320 – 350	°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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