LNP™ THERMOCOMP™ AM COMPOUND DC004XXA11

DESCRIPTION

LNP THERMOCOMP AM DC004XXA11is 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	LNP™ THERMOCOMP™

INDUSTRY	SUB INDUSTRY
Industrial	Industrial General

TYPICAL PROPERTY VALUES

Revision 20251217

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, 5mm/min [1]			
XZ Orientation	86	MPa	ASTM D638 Modified
ZX Orientation	19	MPa	ASTM D638 Modified
Tensile Strain, 5mm/min			
XZ Orientation	1.2	%	ASTM D638 Modified
ZX Orientation	1.2	%	ASTM D638 Modified
Tensile Stiffness, 5mm/min			
XZ Orientation [2]	8.5	GPa	ASTM D638 Modified
ZX Orientation	1.8	GPa	ASTM D638 Modified
Flexural Stress, 5mm/min			
XZ Orientation	28	MPa	ASTM D790 Modified
ZX Orientation	109	MPa	ASTM D790 Modified
THERMAL			
HDT, 1.82 MPa, 3.2mm, annealed	181	°C	ASTM D648
PHYSICAL			
Specific Gravity	1.29	-	ASTM D792
EXTRUSION			
Extruder L/D	24	-	
Drying Temperature	135	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	

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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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