LNP™ THERMOCOMP™ AM Compound DF004XXAR1

DESCRIPTION

LNP THERMOCOMP DF004XXAR1 compound is based on Polycarbonate (PC) resin containing 20% glass fiber for Large Format Additive Manufacturing (LFAM) applications. Added features of this grade include: 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 20251217

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, 5mm/min [1]			
XZ Orientation	87	MPa	ASTM D638 Modified
ZX Orientation	44	MPa	ASTM D638 Modified
Tensile Strain, 5mm/min			
XZ Orientation	3.3	%	ASTM D638 Modified
ZX Orientation	2.1	%	ASTM D638 Modified
Tensile Stiffness, 5mm/min			
XZ Orientation [2]	5.1	GPa	ASTM D638 Modified
ZX Orientation	2.8	GPa	ASTM D638 Modified
Flexural Stress, 5mm/min			
XZ Orientation	65	MPa	ASTM D790 Modified
ZX Orientation	139	MPa	ASTM D790 Modified
THERMAL			
HDT, 1.82 MPa, 3.2mm, annealed	139	°C	ASTM D648
PHYSICAL			
Specific Gravity	1.35	-	ASTM D792
EXTRUSION			
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	

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(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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