LNP™ THERMOCOMP™ AM Compound AF004XXAR1

DESCRIPTION

LNP THERMOCOMP AF004XXAR1 compound is based on Acrylonitrile Butadiene Styrene (ABS) resin containing 20% glass fiber for Large Format Additive Manufacturing (LFAM) applications. Added features of this grade include: Easy Processing, Low Warp and Good Print Surface quality, making them a good candidate material for a broad range of applications and tooling, including thermoforming and vacuum-forming.

TYPICAL PROPERTY VALUES

Revision 20260625

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, 5mm/min [1]			
XZ ORIENTATION	63	MPa	ASTM D638 Modified
ZX ORIENTATION	21	MPa	ASTM D638 Modified
Tensile Strain, 5mm/min			
XZ ORIENTATION	1.8	%	ASTM D638 Modified
ZX ORIENTATION	1.0	%	ASTM D638 Modified
Tensile Stiffness, 5mm/min			
XZ ORIENTATION [2]	5.1	GPa	ASTM D638 Modified
ZX ORIENTATION	2.6	GPa	ASTM D638 Modified
Flexural Stress, 5mm/min			
XZ ORIENTATION	35	MPa	ASTM D790 Modified
ZX ORIENTATION	91	MPa	ASTM D790 Modified
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	103	°C	ASTM D648
PHYSICAL			
Specific Gravity	1.198	-	ASTM D792
EXTRUSION			
Extruder L/D	24	-	
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05 – 0.1	%	
Barrel - Zone 1 Temperature	190 – 230	°C	
Barrel - Zone 2 Temperature	200 – 240	°C	
Barrel - Zone 3 Temperature	210 – 250	°C	
Barrel - Zone 4 Temperature	220 – 260	°C	
Nozzle Temperature	210 – 250	°C	
Melt Temperature	220 – 260	°C	
Bed Temperature	100 – 120	°C	
Extruder Pressure	<13.5	MPa	

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(1) Modified ASTM E8 used for tensile test samples.

(2) Tensile Stiffness (K) is a 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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