LNP™ THERMOCOMP™ AM COMPOUND AC004XXAR1

DESCRIPTION

LNP THERMOCOMP AC004XXAR1 compound is based on Acrylonitrile Butadiene Styrene (ABS) resin containing 20% carbon fiber for Large Format Additive Manufacturing (LFAM) applications. Added features of this grade include: Higher Stiffness vs. glass fiber, 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 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, 5mm/min [1]			
XZ Orientation	89	MPa	ASTM D638 Modified
ZX Orientation	18	MPa	ASTM D638 Modified
Tensile Strain, 5mm/min			
XZ Orientation	1	%	ASTM D638 Modified
ZX Orientation	0.7	%	ASTM D638 Modified
Tensile Stiffness, 5mm/min			
XZ Orientation [2]	11.8	GPa	ASTM D638 Modified
ZX Orientation	2.9	GPa	ASTM D638 Modified
Flexural Stress, 5mm/min			
XZ Orientation	32	MPa	ASTM D790 Modified
ZX Orientation	125	MPa	ASTM D790 Modified
THERMAL			
HDT, 1.82 MPa, 3.2mm, annealed	101	°C	ASTM D648
PHYSICAL			
Specific Gravity	1.14	-	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	120 – 150	°C	
Extruder Pressure	<13.5	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