LNP™ THERMOCOMP™ AM COMPOUND EF004XXAR1

DESCRIPTION

LNP THERMOCOMP EF004XXAR1 is a compound based on Polyetherimide (PEI) resin containing 20% glass fiber for Large Format Additive manufacturing (LFAM) applications. PEI compounds, based on SABIC's inherently flame-retardant ULTEM™ resins, provide low thermal expansion, high temperature performance, excellent strength-to-weight ratio, high modulus and low creep.

GENERAL INFORMATION	
Features	Flame Retardant, Creep resistant, Dimensional stability, High stiffness/Strength, High temperature resistance, No PFAS intentionally added, Additive Manufacturing
Fillers	Glass Fiber
Brands	LNP™ THERMOCOMP™
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Large Format Additive Manufacturing (LFAM)

INDUSTRY	SUB INDUSTRY
Industrial	Industrial General

TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, 5mm/min [1]			
XZ Orientation	94	MPa	ASTM D638 Modified
ZX Orientation	39	MPa	ASTM D638 Modified
Tensile Strain, 5mm/min			
XZ Orientation	2.1	%	ASTM D638 Modified
ZX Orientation	1.7	%	ASTM D638 Modified
Tensile Stiffness, 5mm/min			
XZ Orientation [2]	5.6	GPa	ASTM D638 Modified
ZX Orientation	2.8	GPa	ASTM D638 Modified
Flexural Stress, 5mm/min			
XZ Orientation	62	MPa	ASTM D790 Modified
ZX Orientation	137	MPa	ASTM D790 Modified
THERMAL			
HDT, 1.82 MPa, 3.2mm, annealed	207	°C	ASTM D648
PHYSICAL			
Specific Gravity	1.43	-	ASTM D792
EXTRUSION			
Drying Time	4 – 6	Hrs	
Drying Temperature	120 – 150	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Extruder L/D	24	-	
Maximum Moisture Content	.02	%	
Barrel - Zone 1 Temperature	325 – 345	°C	
Barrel - Zone 2 Temperature	345 – 355	°C	
Barrel - Zone 3 Temperature	355 – 365	°C	
Barrel - Zone 4 Temperature	365 – 375	°C	
Nozzle Temperature	340 – 360	°C	
Melt Temperature	350 – 370	°C	
Bed Temperature	100 – 100	°C	
Extruder Pressure	<17	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