Essentium HTN-CF25
TECHNICAL DATA SHEET

ESSENTIUM HTN-CF25

Essentium HTN-CF25 (high-temperature nylon) is a polyamide based chemistry with a 25% carbon fiber reinforced core. HTN-CF25 is the highest strength and stiffness material in the Essentium portfolio. This material also boasts easy processing and excellent thermal resistance. This material is designed for tooling applications, high strength/stiffness jigs and fixtures, and as a replacement for light-duty aluminum parts.

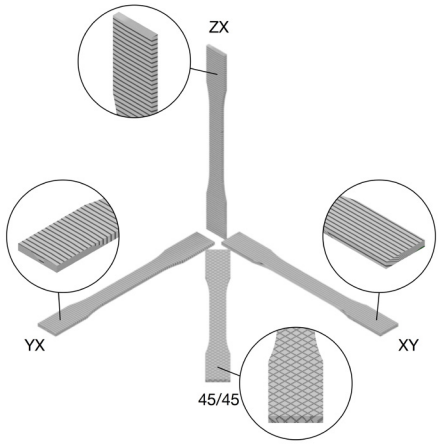
RECOMMENDED FDM PRINT SETTINGS

Nozzle Temperature, ºC	270 - 290	Fan Speed, %	0 – 20
Bed Temperature, ºC	60 – 80	Bed Material	G-10/FR4 or Glass
Print Speed, mm/s	40 – 80	Bed Adhesion Method	Dimafix® and Magigoo®
First Layer Speed, mm/s	40	Infill Density, %	<75
Ex. Multiplier (Flow)	1		

MATERIAL PROPERTIES[1]

Property	Method	Value
Specific Gravity	ISO 1183	1.32

1 Values taken from raw material TDS



MECHANICAL PROPERTIES

Metric	Test Method	Print Orientation			
		XY	45/45	YX	ZX
Flexural Strength, MPa	ISO 178	182	123	81	39
Flexural Modulus, GPa	ISO 178	11.2	5.6	3.5	2.8

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PRINT PARAMETERS[2]

Nozzle Temperature, °C	315	Ex. Multiplier (Flow)	1
Bed Temperature, °C	60	Fan Speed, %	10
Print Speed, mm/s	150	Machine	HSE
Layer Height, mm	0.2	Nozzle Size, mm	0.4

2 Print parameters in reference to mechanical properties

KEY FEATURES:

- High strength
- Solvent resistance
- Good temperature resistance
- Easy-to-print
- Solvent resistance

APPLICATIONS INCLUDE:

- Tooling:
  - –Injection molds
  - –Thermoforming
  - –Blow molding
- High stiffness jigs and fixtures
- High strength end use parts
- Replacement for light duty aluminum parts

Version 0.1
Revision Date: 11/14/19

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