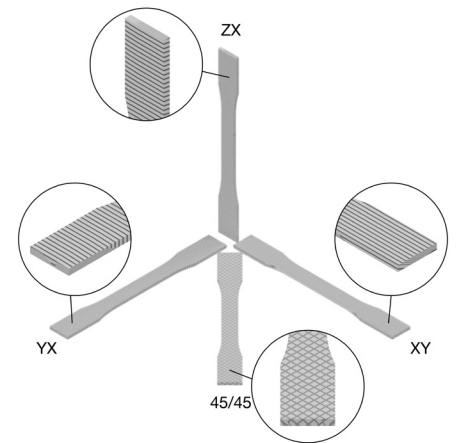


ESSENTIUM PA

Essentium PA is a new polyamide filament specially formulated for additive manufacturing by BASF. Essentium PA provides exceptional strength and durability while retaining a surprising amount of stiffness. It is important to note that the mechanical properties of PA may change with water uptake as it is moisture sensitive. The best prints with Essentium PA typically occur utilizing a glass bed and bed adhesion solution.

Metric	Test Method	Molded Properties	Print Orientation		
			XY	YX	ZX
Tensile Strength, MPa	ASTM D638	55	49	47	24
Tensile Modulus, MPa	ASTM D638	2180	1954	1871	1638
Flexural Strength, MPa	ASTM D790	73	58	32	44
Flexural Modulus, MPa	ASTM D790	1749	1506	877	1097

Metric	Method	Properties
Specific Gravity ²	ISO 1183	1.12
Moisture (50%, RH) ² , %	ISO 62	3.2
Moisture (Sat) ² , %	ISO 62	10.5
Melting Point ² , °C	ISO 3164	189
Heat Deflection Temp., °C	ASTM D648	82



RECOMMENDED PRINT SETTINGS

Extrusion Temperature, °C	245 – 265
Bed Temperature, °C	85 – 100
Enclosure Temperature, °C	Room Temperature
Bed Adhesion Method	Glass Bed with Solution
Ex. Multiplier (Flow)	20 – 50

1 Print settings: nozzle temp: 255°C, bed temp: 85°C, infill: 100%, speed: 30mm/s, layer height: 0.3mm, extrusion multiplier: 1.0, nozzle diameter: 1.0mm

2 Values taken from pellet mfr. TDS