

Test results for HP 3D HR PA12 S, enabled by Arkema

This table shows the values that were obtained for HP 3D HR PA 12 S, enabled by Arkema in the HP Jet Fusion 5600 Series 3D Printing Solution with the Balanced PA 12 S print profile and Type I tensile specimens, following the ASTM D638 standard.

HP 3D HR PA12 S, enabled by Arkema ^{i,ii,iii}	Average (XY)	Average z	Test Method
Tensile strength (MPa) ^{Mv}	45	43	ASTM D638
Tensile modulus (MPa)	1700	1700	ASTM D638
Elongation at yield (%)	10	5	ASTM D638
Elongation at break (%)	12	5	ASTM D638
Impact strength (kJ/m2) ^v	2.5	2	ASTM D256
Density (g/cm3)	0.98		ASTM D792

i. Based on internal testing and measured using the "HP Half_Commercial_Datasheet_Job". Results may vary with other jobs and geometries.

ii. Using HP 3D HR PA 12 S, enabled by Arkema material, 15% refresh ratio, Balanced print profile, natural cooling, and measured after bead-blasting with glass beads at 5-6 bars.

iii. Following all HP-recommended printer setup and adjustment processes and printheads aligned using semi-automatic procedure.

iv. Tensile strength typical variation (95% of parts) falls within the 40-48 MPa range, while tensile modulus values remain within the 1600 to 1900 MPa range.

v. Using the Izod test method A with notched @ 3.2 mm specimen according to the ASTM D256 standard.