

HP 3D High Reusability PA 12 GB

Multi Jet Fusion | PA12-GB | powder

Compiled by FabDigit from manufacturer technical data. Values below belong to this named product; unreported properties are omitted.

Manufacturer: HP

Source revision: HP materials page, 2026

Recorded system family: HP Jet Fusion 5200, 5000 and 4200 series

As-printed colour: Gray. 40% glass beads

Test values are typical reported results, not guaranteed design allowables or finished-part certification. Review the complete source for specimen preparation, orientation and conditioning.

Mechanical

PROPERTY	VALUE	TEST / CONDITION
Charpy Impact, Notched (ISO 179)	3 kJ/m2	per ASTM D256; Izod notched, kJ/m2; XY 3 / Z 3
Tensile Strength (Ultimate)	29 MPa	per ASTM D638; XY 29 / Z 30
Elastic (Young's) Modulus	2.6 GPa	per ASTM D638; XY 2.6 / Z 3.0 GPa
Elongation at Break	10 %	per ASTM D638; XY 10 / Z 5

Thermal

PROPERTY	VALUE	TEST / CONDITION
Heat Deflection Temp. @ 0.45 MPa	170 deg C	per ASTM D648; XY 170 / Z 172
Heat Deflection Temp. @ 1.8 MPa	110 deg C	per ASTM D648; XY 110 / Z 120

Physical

PROPERTY	VALUE	TEST / CONDITION
Melting Temperature (Tm)	186 deg C	per ASTM D3418; Powder melting point (DSC)
Density	1.3 g/cm3	per ASTM D792

Manufacturability

PROPERTY	VALUE	TEST / CONDITION
Powder Particle Size (D50)	58 um	per ASTM D3451
Powder Bulk Density	0.48 g/cm3	per ASTM D1895

Selection and finishing

A glass-bead-filled HP MJF PA12 for stiff, dimensionally stable housings, fixtures and tooling.

Design: Add radii at stress concentrations and validate the loaded orientation. Use the HP 5200 family scope and check whether a less brittle unfilled PA12 would be safer around clips or fasteners.

Finishing: Gray is the as-printed colour. Filled surfaces can respond differently to blasting, dyeing and coatings, so confirm colour and adhesion on the actual material.

Source and document scope

HP manufacturer source reference - HP materials page, 2026

<https://www.hp.com/us-en/printers/3d-printers/materials.html>

FabDigit product page: <https://www.fabdigit.com/materials/polymer-pa12/hp-pa-12-gb/>

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