

HP 3D High Reusability TPA (enabled by Evonik)

Multi Jet Fusion | PEBA | powder

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

Manufacturer: HP

Source revision: HP white paper, August 2021

Recorded system family: HP Jet Fusion 4200 series

As-printed colour: White

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

Physical

PROPERTY	VALUE	TEST / CONDITION
Density	1 g/cm3	per ASTM D792
Melting Temperature (Tm)	152 deg C	per ASTM D3418; Powder melting point (DSC)

Mechanical

PROPERTY	VALUE	TEST / CONDITION
Tensile Strength (Ultimate)	10 MPa	per DIN 53504 / ISO 37; XY 10 / Z 8
Elastic (Young's) Modulus	0.075 GPa	per DIN 53504 / ISO 37; XY 0.075 / Z 0.080 GPa
Elongation at Break	250 %	per DIN 53504 / ISO 37; XY 250 / Z 120
Tear Strength	50 kN/m	per ASTM D624; XY 50 / Z 40

Mechanical - continued

PROPERTY	VALUE	TEST / CONDITION
Compression Set (22 h, 70 deg C)	40 %	per DIN ISO 815; XY 40 / Z 40
Hardness, Shore A	91 Shore A	per ASTM D2240; XY 91 / Z 91

Manufacturability

PROPERTY	VALUE	TEST / CONDITION
Powder Particle Size (D50)	77 um	per ASTM D3451
Powder Bulk Density	0.42 g/cm3	per ASTM D1895

Selection and finishing

A lightweight HP MJF thermoplastic polyamide elastomer for resilient parts that need rebound and uniformity rather than rigid-nylon behavior.

Design: Validate wall or lattice geometry, rebound, compression set and the weak build direction under the actual cycling load. Confirm that the 4200 process route remains available before design freeze.

Finishing: White is the cataloged as-printed colour and the row is not offered as dyeable. Flexible coatings or cleaning steps must be tested for cracking, friction and media compatibility.

Source and document scope

HP manufacturer source reference - HP white paper, August 2021

https://impacsystems.com/wp-content/uploads/2022/06/HP-3D-HR-TPA-enabled-by-Evonik-for-MJF-4200-Series_Mechanical-Props-Whitepaper_August-2021.pdf

FabDigit product page: <https://www.fabdigit.com/materials/polymer-tpa-peba/hp-tpa/>

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