HP 3D High Reusability PP (Polypropylene)

MULTI JET FUSION MATERIAL SPECIFICATIONS

Highlights

- Great surface resolution/feature details with powder bed fusion technology
- Fully dense and nearly isotropic mechanical properties
- Excellent chemical resistance, low moisture absorption, and weldable
- Low unit cost for batches of small parts

Applications

High-volume funtional prototypes & limited-run production for:

- Vehicles electronic system housings, guides, grommets, clips & covers
- Vessels for fuel, oil housings and washer fluid
- Envionmental control system components like fan housings, plenums, ducting, valves, divertors and vents

TYPICAL PHYSICAL PROPERTIES

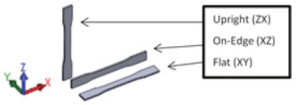
MECHANICAL PROPERTIES	TEST METHOD	ENGLISH		METRIC	
		XY AXIS	Z AXIS	XY AXIS	Z AXIS
Color/Appearance	Visual	Natural Grey/Standard Black dye finish		Natural Grey/Standard Black dye finish	
Density	DIN 53466	0.0314 lb/in³ (approx.)		0.87 g/cm³	
Elongation at Break	ASTM D638	20%	14%	20%	14%
Heat Deflection Temp @66 psi (0.45 MPa)	ASTM D648	212°F	212°F	100°C	100°C
Heat Deflection Temp @264 psi (1.82 MPa)	ASTM D648	140°F	140°F	60°C	60°C
Tensile Modulus	ASTM D638	232 ksi	232 ksi	1,600 MPa	1,600 MPa
Tensile Strength	ASTM D638	4,206 psi	4,206 psi	29 MPa	29 MPa
Izod Impact Strength (notched)	ASTM D256	1.67 ft-lb/in²	1.42 ft-lb/in²	3.5 kJ/m²	3.0 kJ/m²

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 PP enabled by BASF material, 20% refresh ratio, Balanced print profile, natural cooling, and measured after bead-blasting with glass beads (70–110 µm) 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 27–31 MPa range, while tensile modulus values remain within the 1400–1900 Mpa range.
v. Tensile test type I specimens measured with a pulling speed of 5 mm/min to comply with ASTM D638 test standards.
vi. Using the Izod test method A with notched @ 3.2 mm specimen according to the ASTM D256 standard.
vii. Using a standard bar specimen measuring 5" x ½" x ¼" in accordance with ASTM D648

The information presented represents typical values intended for reference and comparison purposes only. It should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, color etc. Actual values will vary with build conditions. Product specifications are subject to change without notice.

The performance characteristics of these materials may vary according to application, operating conditions, or end use. Each user is responsible for determining that the material is safe, lawful, and technically suitable for the intended application. Stratasys makes no warranties of any kind, express or implied, including, but not limited to, the warranties of merchantability, fitness for a particular use, or warranty against patent infringement.

XZ = X or "on edge"
XY = Y or "flat"
ZX = or "upright"



stratasys
DIRECT MANUFACTURING

INFO@STRATASYSDIRECT.COM / STRATASYSDIRECT.COM