HP 3D Printing polymer materials portfolio selection guide[1]

	HP 3D Printing Materials for HP Jet Fusion 5420W[2] 3D Printing Solution	HP 3D Printing Materials for HP Jet Fusion 5200 Series 3D Printing Solutions					HP 3D Printing Materials for HP Jet Fusion 4200 Series 3D Printing Solutions					HP 3D Printing Materials for HP Jet Fusion 500/300 Series 3D Printers[3]
	HP 3D HR PA 12 W[2]	HP 3D HR PA 11	HP 3D HR PA 12	HP 3D HR PA 12 GB	HP 3D HR PP enabled by BASF[4]	BASF Ultrasint® TPU01[4]	HP 3D HR PA 11	HP 3D HR PA 12	HP 3D HR PA 12 GB	HP 3D HR TPA enabled by Evonik[5]	ESTANE® 3D TPU M95A[5]	HP 3D HR CB PA 12
	Rigid polymer	Rigid polymer				Elastomeric polymer	Rigid polymer			Elastomeric polymer		Rigid polymer
Stiffness	●	●	●	★	■	▲	●	●	★	▲	▲	●
Impact resistance	■	●	■	▲	■	★	●	■	▲	★	★	■
Elongation	■	●	■	▲	■	★	●	■	▲	★	★	■
Dimensional capability	★	●	★	●	■	■	●	★	●	■	■	■
Level of detail	★	★	●	●	■	■	★	●	●	●	■	●
Flat part	Under testing	■	●	★	▲	■	■	●	★	■	■	●
Temperature resistance	Under testing	▲	■	●	■	▲	▲	■	●	■	●	■
Chemical resistance[6,7]	Under testing	●	●	n/a	★	■	●	●	n/a	▲	■	●
Low moisture absorption	Under testing	▲	▲	▲	★	■	▲	▲	▲	■	■	▲
Lightweight	●	●	●	■	★	■	●	●	■	●[8]	▲	●

★ Best ● Good ■ Fair ▲ Not recommended

1. Based on internal HP testing, October 2022. For testing methodology and results, see hp.com/go/3Dprintingmaterialswhitepapers. Please consult your local sales representative for more information.
2. Selected availability from January 2023 in Europe and the US. General availability from April 2023 for the rest of the world.
3. Note that HP Jet Fusion 500/ 300 Series 3D Printers have been discontinued, however compatible HP 3D long-term consumables, accessories, supplies, and services are expected to be available until October 31, 2028. Full color parts applicable only with the HP Jet Fusion color 3D printers.
4. Available for HP Jet Fusion 5200 Series 3D Printing Solutions.
5. Available for HP Jet Fusion 4200 Series 3D Printing Solutions.
6. For HP 3D High Reusability PA 11, PA 12, and CB PA 12, based on internal HP testing, June 2017. Tested with diluted alkalies, concentrated alkalies, chlorine salts, alcohol, ester, ethers, ketones, aliphatic hydrocarbons, unleaded petrol, motor oil, aromatic hydrocarbons, toluene, and DOT 3 brake fluid. For HP 3D High Reusability PP enabled by BASF, based on internal HP testing, May 2020, with tests for mechanical property retention, dimensional stability, and weight change after 7- and 30-day immersion with acids, bases, organic solvents, and aqueous solutions. Due to the material characteristics, extra tuning is required in part design and printing, compared to other rigid HP 3D Printing materials. For BASF Ultrasint® TPU01, based on testing by BASF, April 2020, according to ASTM D471 for select IRM oils and Fuel A.
7. For HP 3D High Reusability PP enabled by BASF, based on internal HP testing, May 2020, with tests for mechanical property retention, dimensional stability, and weight change after 7- and 30-day immersion with acids, bases, organic solvents, and aqueous solutions. Due to the material characteristics, extra tuning is required in part design and printing, compared to other rigid HP 3D Printing materials.
8. Based on published specifications as of September, 2020. HP Jet Fusion 3D Printing Solutions using HP 3D High Reusability TPA enabled by Evonik provide up to 17% lower printed part weight when compared to common powder-based thermoplastic elastomers printed under similar conditions.

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