

SOLUTION DATA SHEET

New ESTANE® 3D TPU M95A Powder for HP's Multi Jet Fusion 4200 Series



Markets	Footwear (upper, midsoles and insoles), prostheses (flexible prosthetic cover), wearables and consumer goods (e.g. bicycle helmets and seats), transportation (e.g. seats, arm rests, radio buttons, exhaust parts), seals, bearings and other industrial applications (e.g. flexible hoses, fixtures, jigs, end of arm tooling)
Polymer	ESTANE® thermoplastic polyurethane (TPU)
Key Benefits	<ul style="list-style-type: none"> • Excellent processing & unpacking at room temperature (PA12 like) • High material reusability up to 80% • Great rebound, abrasion resistance and energy return

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 contact us at <http://go.lubrizol.com/EP>

Lubrizol Engineered Materials is a certified HP materials partner and has developed ESTANE® 3D TPU M95A for the HP Jet Fusion 4200 series 3D printing solution. This material is a hard-flexible thermoplastic material with excellent processing and cold unpacking features. The material delivers excellent elongation, impact absorption and tensile strength, and shows good energy rebound, high elasticity, low abrasion rate and good compression set.

Printed parts of ESTANE® 3D TPU M95A TPU powder have excellent mechanical properties and can meet performance requirements for a wide array of functional applications across many industries.

ESTANE® 3D TPU M95A	Half print bed	Full print bed	
Tensile Strength	18	17	MPa
Elongation at Break	430	400	%
Abrasion Loss	80	100	mm ³
Hardness (solid part)	95	95	Shore A

Measured in the XY direction and half print bed and full print bed, 100% fresh powder

Table 1: Overview of the properties of the commercial grade ESTANE® 3D TPU M95A

Other key benefits of ESTANE 3D TPU M95A:

- Skin sensitization and cytotoxicity tests PASS in accordance with ISO 10993-5 and 10993-10
- High temperature resistance above 200°C
- Watertight parts can be produced
- Ideal 3D printing material for prototyping and manufacturing scale-up applications

As a result of ESTANE 3D TPU M95A's excellent handling properties during unpacking, less material goes to waste, less labor is needed, fewer 3D parts are damaged, and more powder is recovered for future use. This benefit helps make ESTANE 3D TPU M95A a more cost-effective solution versus many other elastomeric 3D printing materials, especially when printing complex parts or lattice structures.

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We also offer a flexible spray coating, post-processing technology that delivers 4 vibrant colors while also providing surface smoothing attributes to the TPU (more colors on demand).

Additionally, to enhance our ability as a 3D printing solution provider, Lubrizol added design for Additive Manufacturing (DfAM) along with engineering and manufacturing capabilities.

For more information or to contact us for post-processing guidelines and solutions for ESTANE 3D TPU M95A visit our web site:

<https://www.lubrizol.com/Engineered-Polymers/Technologies/3D-Printing-Materials>

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