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forward am

MATERIAL DATA SHEET
P3™ DLP

PRELIMINARY

P3™ Stretch™ 80 V2

An easy-to-use general-purpose elastomer for flexible prototypes with superior strength, rebound and medium hardness (Shore 70A). Excellent replacement for traditional polyurethane (TPU).



P3™ Stretch 80 V2 is a general-purpose TPO-free elastomer for prototyping. It comes at an affordable price point, making it an interesting entry-level material for users starting elastomer printing. Less viscous than typical elastomers, P3 Stretch 80 V2 – developed by Forward AM - processes easily and fast on Origin®, is simple to clean and UV post-cure. The material makes an excellent replacement for traditional polyurethane or TPU.

Key Features

- Excellent rebound
- Higher durometer allows for faster printing.
- Outstanding surface finish – ideal for elastomeric parts where aesthetics, grip, and interaction with Class A surfaces is essential.
- Good mechanical properties and chemical resistance
- Simple cleaning and UV post-curing process

Industries & Applications

- Aerospace
- Automotive
- Industrial
- Prototyping
- Jigs & fixtures
- Seals & Gaskets
- Fit & form testing for consumer products, including footwear, watch bands, accessories.

Liquid Properties

Property	Unit	Method	Post-Cured
Appearance			Matte Black
Viscosity (25°C)	mPa.s	Cone/Plate Rheometer	600
Density (Printed Part)	g/cm³	ASTM D792	1.11
Density (Liquid Resin)	g/cm³	ASTM D405-18a	1.06





Mechanical Properties

Property	Unit	Method	Post-Cured
Young's Modulus	MPa	ASTM D412	54 ± 4.5
Tensile Strength	MPa	ASTM D412 type C	7
Elongation at Break	%	ASTM D412 type C	133
Tear Resistance	N/mm	ASTM D624 C	18
Shore Hardness	A	ASTM D2240	70
Rebound resilience	%	ASTM D7121	60
Abrasion resistance	mm^3	ISO4649	375
Water absorption	%	ASTM D570	2.36 (24 hours), >5% (>160 hours)
Compression set at 23°C, 72h (constant force)	%	ASTM D395-A	2
Compression set at 23°C, 72h (constant deflection)	%	ASTM D395-B	18
Rossflex, 23°C, 60° angle		ASTM D1052 (2 mm)	>40.000 Cycles (no crack propagation)
Rossflex, -10°C, 60° angle		ASTM D1052 (2 mm)	>20.000 Cycles (no crack propagation)

Thermal Properties

Property	Unit	Method	Post-Cured
Glass transition temperature (DMA, tan(d))	°C	ASTM D4065	-9.4
Vicat temperature	°C	ASTM D1525	92

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