



Nylon 12 PA

MULTI JET FUSION MATERIAL SPECIFICATIONS

Highlights

- Best surface resolution/feature details with powder bed fusion technology
- Fully dense and nearly isotropic mechanical properties
- Excellent chemical resistance to oils, greases, hydrocarbons & alkalies
- Low unit cost for batches of small parts (less than 4" max length)

Applications

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

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

TYPICAL PHYSICAL PROPERTIES

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH		METRIC	
		XY AXIS	ZX AXIS	XY AXIS	ZX AXIS
Color/Appearance	Visual	Black		Black	
Density	DIN 53466	0.036 lb/in ³		1.01 g/cm ³	
Elongation at Break	ASTM D638	20%	15%	20%	15%
Flexural Strength	ASTM D790	9,425 psi	10,150 psi	65 MPa	70 MPa
Flexural Modulus	ASTM D790	251 ksi	251 ksi	1,730 MPa	1,730 MPa
Heat Deflection Temp @66 psi (0.45 MPa)	ASTM D648	347°F	347°F	175°C	175°C
Heat Deflection Temp @264 psi (1.82 MPa)	ASTM D648	203°F	223°F	95°C	106°C
Tensile Modulus	ASTM D638	247 ksi	261 ksi	1,700 MPa	1,800 MPa
Tensile Strength	ASTM D638	6,960 psi	6,960 psi	48 MPa	48 MPa
Izod Impact Strength (notched)	ASTM D256	3.33 ft-lb/in ²		3.5 kJ/m ²	
Surface Finish	Down-facing surfaces	125-250 microinches		3-6 µm RA	
Volume Resistivity (22°C, 50%RH, 500V)	ASTM D257-93	—		—	

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.

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

