

### Key Features

- High abrasion resistance
- Excellent electrical insulation
- Good weather resistance
- Good chemical resistance

### Common Applications

- Fuel lines, pneumatic brake lines, hydraulic lines
- Air intake system
- Automotive electronics and lighting
- Bicycle derailleur
- Shoe soles
- Gas and oil pipelines
- Electrical appliances
- Mobile phones

### Material Description

Nylon PA12, also known as polyamide 12, is a high-performance thermoplastic polymer commonly used in additive manufacturing, particularly in powder bed fusion processes MJF. This material offers exceptional mechanical properties, including high strength, toughness, and impact resistance, along with good chemical resistance and low moisture absorption. Nylon PA12 is well-suited for producing functional prototypes, end-use parts, and components with intricate geometries. Its ability to maintain dimensional stability under various environmental conditions makes it suitable for applications in automotive, aerospace, consumer goods, and healthcare industries. Additionally, Nylon PA12 exhibits excellent surface finish and can be post-processed to achieve desired aesthetics or functional characteristics.

### Mechanical Properties

Flexural Strength	70 MPa
Tensile Strength	48 MPa
Hardness	Short D86
Elongation at Break	15 – 20%

### Physical Properties

Density	0.05 lb/in <sup>3</sup> (1.27 g/cm <sup>3</sup> )
Modulus of Elasticity	5.00 GPa
Heat Deflection Temp.	311°F (155 °C)

### Technical Assistance

Our knowledgeable staff, supported by our in-house team of expert metallurgists and engineers, is ready to assist you with any technical inquiries.

### InstaVoxel™ – On-Demand Manufacturing Expert

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InstaVoxel's quality control system is ISO-9001 certified, and all our partners hold relevant certifications.



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