Material Information

Nylon PA 12 White

Introduction

Nylon PA 12 White is compatible with selective laser sintering. It can produce detailed and robust parts ideal for functional prototypes and end-use components like jigs, fixtures, gears, and bearings.

Advantages

SLS 3D printed PA 12 white offers high impact and temperature resistance, durability, and stability under various environmental conditions.

Disadvantages

Prone to shrinkage and warping, and often requires extensive post-processing to achieve a smooth surface.

Tolerance

±300μm or 0.3%

Recommendation

It is suitable for manufacturing durable prototypes, functional parts and assemblies that require high precision and strength.

Material Specifications		
Density	DIN 53466	0.95 g/cm³
Heat Deformation (0.45 MPa)	ASTM D648	180.85℃
Heat Deformation (1.8 MPa)	ASTM D648	115.4℃
Tensile Strength	ASTM D638	50MPa
Tensile Modulus	ASTM D638	2000MPa
Elongation at Break	ASTM D638	11.5%
Flexural Strength	ASTM D790	60MPa
Flexural Modulus	ASTM D790	1900MPa
Notched Impact Strength	ASTM D256	21 J/m
Unnotched Impact Strength	ASTM D256	294 J/m

Attention

Products printed with powdered material come with grainy surfaces. If you have a specific requirement for surface finishing, we offer our in-house post-processing service, which includes a variety of post-processing services, including vibratory smoothing and vapor smoothing, to achieve a smooth surface finish.

Applications

KingStar finds people using nylon PA12 white to make functional parts and prototypes in the following industries and applications.

Automotive:
Functional prototypes, housings, and under-the-hood components that require durability and heat resistance. Examples include air intake manifolds, brackets, and clips.

Aerospace:
Lightweight and durable parts such as ducting, housings, and structural components. These parts benefit from the material's strength and resistance to harsh environments.

Consumer Goods:
Durable and lightweight parts like eyewear frames, sports equipment, and household items. The material's fine-detail capabilities make it suitable for intricate designs.

Medical Devices:
Biocompatible components such as surgical guides, prosthetics, and orthotics. Nylon PA 12's low moisture absorption and chemical resistance are advantageous in medical applications.

Electronics:
Enclosures, connectors, and other mechanical components. The material's electrical insulation properties and durability make it ideal for electronic housings and connectors.