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Product specifications

STYX PA6 is an easier to 3D print nylon filament compared to other PA6 filaments. It has much lower warping and improved layer adhesion. This makes STYX PA6 a versatile nylon filament for 3D printing end-use parts.

FormFutura's STYX PA6 exhibits a good resistance to oils, fuels, and lubricants. It has a high impact strength and good mechanical properties. 3D printed parts are strong, durable and show good resistance to wear and abrasion. This makes STYX PA6 a great filament for 3D printing functional engineering parts.

Important key features

- Low warping PA6 filament.
- Easy to print with a very good layer adhesion.
- High strength and resistance to abrasion.
- High chemical resistance.
- Good electrical insulating properties.

Suitable applications

- Making electrical insulating parts.
- End-use parts that require a high wear resistance .
- Parts that are resistant to oils, lubricants and fuels.
- Making jigs and fixtures.

Material properties

Material properties	Typical value	Test Method
Density	1.15 g/cm ³	ISO 1183
Moisture absorption, 23°C/ 50% r.h.	3,00%	ISO 62
Water absorption, 23°C/ saturation in water	9.5%	ISO 62
Melt Volume Rate, 275°C/5kg	120 cm ³ /10 min	ISO 1133

Mechanical properties

Tensile modulus (23°C, 1mm/min)	2900 MPa	ISO 527-1/-2
Tensile strength (23°C, 50mm/min)	50 MPa	ISO 527-1/-2
Elongation at break (23°C, 50mm/min)	1,9%	ISO 527-1/-2
Flexural modulus (23°C, 2mm/min)	2800 MPa	ISO 178
Flexural strength (23°C, 2mm/min)	112 MPa	ISO 178
Charpy unnotched impact strength, 23°C	139 NB kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	6,8 kJ/m ²	ISO 179/1eU

Thermal properties

Melting temperature (DSC), 10°C/min	185°C	ISO 3146
Heat Deflection Temperature (HDT)	60°C	ISO 75-1/-2
Flammability, 1.5mm	V2	UL-94

Drying recommended

PA6 is a hygroscopic thermoplastic material and will attract and hold water molecules from the surrounding environment. For optimal printing results it is recommended to dry the filament before usage and even 3D print from a dry box for larger prints. This will ensure optimal material properties.





Storage and handling

Filament should be stored at room temperature in a dry and dark place with humidity below 15%. Recommended storage temperature is ca. 18-25°C (64.4 -77.0°F). Keep out of moisture, sunlight and direct heat. When stored properly, product has a shelf life of 24 months. To obtain the best parameters of the printed object, it is recommended to dry the material prior to usage and to 3D print it directly from a dry box.

Product export information

HS Code	Description	Origin
39169090	Monofilament for 3D printing	European Union

Disclaimer

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