

Cheetah™ (TPU) 3D Printing Filament

Why Cheetah™?

Cheetah™ flexible filament is an elastic thermoplastic which makes it ideal for printing objects that need to be flexible yet strong and durable. The result is a filament that is printable across all types of desktop 3D printers at ABS and PLA speeds, many times twice the speed of other flexible materials on the market.


Cheetah™ is manufactured by NinjaTek, an approved Adaptiiv supplier, and has been fully validated through Adaptiiv's regulatory processes to ensure consistent diameter and material properties.



Key Features

- Flexible yet able to withstand wear and tear
- Prints at speeds greater than 60mm/s
- Industry leading toughness and durability to ensure longevity in printed parts
- Chemical resistance to many materials
- Smooth to touch
- Validated for use with 3DBolus software on the Airwolf 3D Axiom 20 printer

Technical Specifications

Filament	Cheetah™
Supplier	NinjaTek 
Material	TPU
Diameter	2.85 mm
Hardness ¹	50D (95A)
Flexibility (elastic modulus)	26 MPa
Raw density ²	1.22 g/cc
Print density ³	1.12 g/cc
RED ³	1.11
Typical accuracy (no taping)	4.1 mm
Typical accuracy (with taping)	1.4 mm
Ease of printing	Easy
Print speed ⁴	Fast
Surface feel	Soft

Regulatory Clearance

Adaptiiv is the first company in the world to receive US FDA 510(k) regulatory clearance to market a 3D printing software solution for use in radiation oncology, is ISO 13485 certified, has a CE Mark, and TGA (Australia) approval.

Cheetah™ has been fully validated for use with Adaptiiv's 3D Bolus software on the Airwolf 3D Axiom 20 printer.

¹ The Shore A Hardness Scale measures the hardness of flexible mold rubbers and semi rigid plastics.

² The Shore D Hardness Scale measures the hardness of hard rubbers, semi-rigid plastics and hard plastics.

³ Density of raw filament is provided by supplier.

³ Print density and RED are determined using both CT HU values and physical density measurements.

⁴ Print speed (large chest wall print (around 260g)):

- **Slow:** Greater than 13 hours (20 mm/s and below on Axiom 20)
- **Moderate:** Between 9 and 13 hours (40 and 30 mm/s on Axiom 20)
- **Fast:** Less than 9 hours (60 and 50 mm/s on Axiom 20)