

### Infix 3D Printing Filaments

Infix 3D Printing Filaments are part of the Infix Materials range of products, which focuses on development of premium production materials, mainly for additive manufacturing.

Our filaments are developed in-house and are produced in ISO 9001 certified facilities where we have full control over specifications, production chain, and quality control.

### TPU Premium95A Overview

TPU (Thermoplastic Polyurethane) is a great choice for applications where material flexibility, elasticity, and resilience are desirable.

Printing difficulty, low printing speeds and being less suitable for most automated filament systems, TPU is not an everyday choice of materials for FDM 3D printing.

Other qualities of TPU filaments include chemical resistance, weather resistance (especially in low temperature), low warpage and high resilience. It has many potential uses in vibration dampening applications, mechanical impact protection applications, outdoor applications and high mechanical wear applications.

With a shore of 95A Infix TPU Premium95A filament provides flexibility without compromising durability and has good impact and tear resistance.

Specialized formulation allows Infix TPU Premium95A to be printed at speeds of up to 3x higher than regular TPU with reduced stringing.

## pros



**flexible and strong**



**good chemical resistance**



**weather resistant**



**highly resilient**



**3x faster printing compared to regular TPU**

## cons



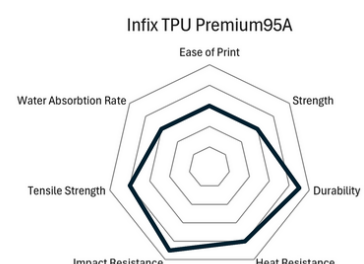
**not beginner-friendly**



**hygroscopic**



**not suitable for AMS**



### Material Properties

| Category              | Property             | Typical Value          | Testing Method |
|-----------------------|----------------------|------------------------|----------------|
| PHYSICAL PROPERTIES   | Material Density     | 1.20 g/cm <sup>3</sup> | ASTM D 792     |
| MECHANICAL PROPERTIES | Tensile Strength     | 45 MPa                 | ASTM D 412     |
|                       | Hardness             | 95A                    | ASTM D 2240    |
|                       | Tear Strength        | 140N/mm                | ASTM D 624     |
|                       | Izod Impact Strength | 34.4 KJ/m <sup>2</sup> | ISO 180        |
|                       | Elongation at Break  | 500%                   | ASTM D 412     |
|                       | Bending Strength     | 4.3 MPa                | ISO 178        |
|                       | Flexural Modulus     | 78.7 MPa               | ISO 178        |

### Operating Conditions

| Category              | Parameter                                                | Reference Value |
|-----------------------|----------------------------------------------------------|-----------------|
| PRINT SETTINGS        | Nozzle Temperature                                       | 230-240°C       |
|                       | Bed Temperature                                          | 0-40°C          |
|                       | Active Cooling Fan                                       | NO (max 20%)    |
| ENCLOSURE REQUIREMENT | Generally not required (check your printer requirements) |                 |
| DRYING REQUIREMENT    | YES, 6-8 hours at 60°C                                   |                 |

### Storage Conditions

| Parameter                                                                          | Reference Value |
|------------------------------------------------------------------------------------|-----------------|
| Temperature                                                                        | 15-25°C         |
| Humidity                                                                           | ≤20% RH         |
| Avoid direct UV light. Materials oxidation may be accelerated and colors can fade. |                 |

Infix PLA+ 3D printing filament can be used with any desktop or industrial FDM/FFF 3d printer with a heated bed that is capable of generating the required operating conditions and is designed to operate within the specifications of the filament models selected.

3D printer configurations and settings are available on our website: [www.infix.global/3d-printing](http://www.infix.global/3d-printing)

For additional technical support, you can contact us at: [filament-support@infix.global](mailto:filament-support@infix.global)

### Disclaimer

The information on the datasheet is accurate to the best of Infix Global Limited knowledge. This document should be used as reference only. Your results may differ depending on your specific setup and equipment. You are encouraged to perform specific tests for any application that requires engineering around specifications.

Infix Global Limited will not be liable for any damage, loss or injury as a result of using Infix 3D Printing Filaments in a particular project.