

# Flexible 85A TDS

## Thermoplastic Polyuretane (TPU) for FDM Printers

### Product Description

AzureFilm flexible filament consistency and printability outperforms other polyurethane materials. With its core formula and ultra resistant materials used as base mixture, allows printing at a high speed while maintaining firm and smooth outprints. Filament can be used for most types of 3D printers, with emphasis on direct driven extruders.

### Properties

| Property of 3D printed specimens | Test method               | Value                         |
|----------------------------------|---------------------------|-------------------------------|
| Material                         | Thermoplastic Polyuretane | Color White                   |
| Density                          |                           | 1,11 – 1,13 g/cm <sup>3</sup> |
| Tensile modulus                  | ASTM D638                 | 12 MPa                        |
| Tensile strength [Yield]         | ASTM D638                 | 4 MPa                         |
| Strain at break (Tensile)        | ASTM D638                 | 26 MPa                        |
| Elongation at yield              | ASTM D638                 | 65%                           |
| Elongation at break              | ASTM D638                 | 660%                          |
| Hardness                         | ASTM D2240                | 85-88 Shore A                 |

### Test specimens print settings

|                       |                      |                            |
|-----------------------|----------------------|----------------------------|
| 3D printer: AzureFilm | Infill: 100 %        | Nozzle temperature: 230 °C |
| Slicer: Cura          | Shells: /            | Bed temperature: 60 °C     |
| Nozzle: 0,4 mm        | Layer height: 0,2 mm | Print speed: 30 mm/s       |

### Printing Recommendations

Nozzle temperature: 200 – 240°C

Heated bed: recommended 0 – 80 °C

Print speed: 10 – 30 mm/s

Build platform: Blue tape, Kapton tape. Recommended: Glass bed + Dimafix spray