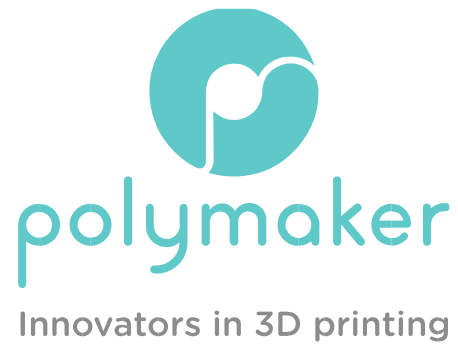




## Technical Data Sheet

*PolyFlex™ TPU95-HF*

[www.polymaker.com](http://www.polymaker.com)

V5.1



PolyFlex™ TPU95-HF, created from Covestro's Addigy® family, is a TPU with high flow properties making it ideal for high speed printing. Combined with its UV resistance, PolyFlex™ TPU95-HF unlocks new applications for flexible materials in manufacturing.

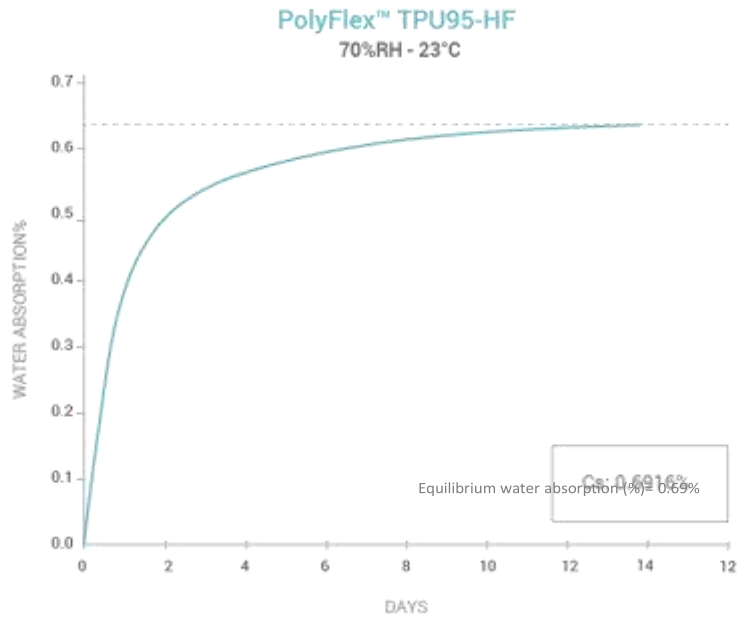
### ***PHYSICAL PROPERTIES***

| Property           | Testing Method    | Typical Value                   |
|--------------------|-------------------|---------------------------------|
| Density            | ISO1183, GB/T1033 | 1.16 g/cm <sup>3</sup> at 23 °C |
| Melt index         | 185°C, 1.2 kg     | 9.3 g/10min                     |
| Light transmission | N/A               | N/A                             |
| Flame retardancy   | N/A               | N/A                             |

### ***CHEMICAL RESISTANCE DATA***

| Property                  | Testing Method    |
|---------------------------|-------------------|
| Effect of weak acids      | Not resistant     |
| Effect of strong acids    | Not resistant     |
| Effect of weak alkalis    | Not resistant     |
| Effect of strong alkalis  | Not resistant     |
| Effect of organic solvent | No data available |
| Effect of oils and grease | No data available |

### ***MOISTURE ABSORPTION CURVE***



## MECHANICAL PROPERTIES

| Property                  | Testing Method         | Typical Value    |
|---------------------------|------------------------|------------------|
| 100% modulus (X-Y)        | ISO 37, GB/T 528       | 13.24 ± 0.29 MPa |
| Tensile strength (X-Y)    | ISO 37, GB/T 528       | 23.11 ± 0.63 MPa |
| Elongation at break (X-Y) | ISO 37, GB/T 528       | 462.3 ± 21.1 %   |
| Shore hardness            | ISO 7619-1, GB/T 531.1 | 95A              |

## RECOMMENDED PRINTING CONDITIONS

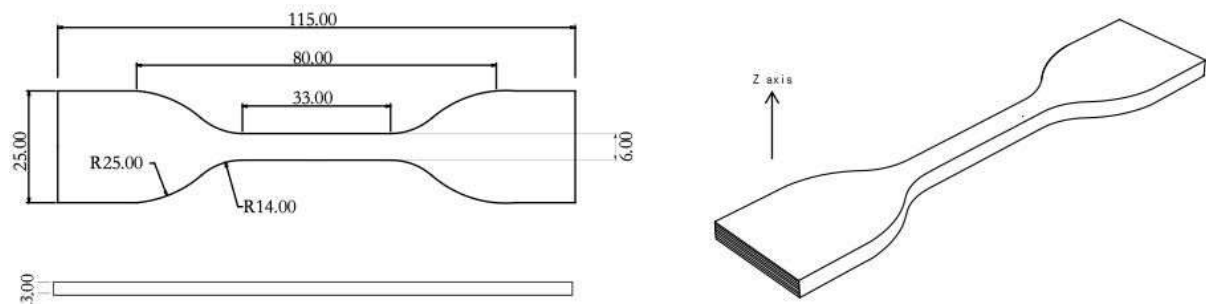
\* Based on 0.4 mm nozzle and Simplify 3D v.4.0. Printing conditions may vary with different nozzle diameters

| Parameter                |                             |
|--------------------------|-----------------------------|
| Nozzle temperature       | 200 – 220 (°C)              |
| Build surface material   | BuildTak®, Glass, Blue Tape |
| Build surface treatment  | PVA or PVP glue, Magigoo    |
| Build plate temperature  | 25 - 50 (°C)                |
| Cooling fan              | ON                          |
| Printing speed           | 40-100 (mm/s)               |
| Raft separation distance | 0.2 (mm)                    |
| Retraction distance      | 3 (mm)                      |
| Retraction speed         | 40 (mm/s)                   |

|                              |                                   |
|------------------------------|-----------------------------------|
| Environmental temperature    | Room temperature                  |
| Threshold overhang angle     | 40 (°)                            |
| Recommended support material | PolySupport™ and PolyDissolve™ S1 |

## TENSILE TESTING SPECIMEN

ISO 37, GB/T 528



## HOW TO MAKE SPECIMENS

\*All specimens were conditioned at room temperature for 24h prior to testing

|                           |        |
|---------------------------|--------|
| Printing temperature      | 210 °C |
| Bed temperature           | 50 °C  |
| Shell                     | 2      |
| Top & bottom layer        | 4      |
| Infill                    | 100%   |
| Environmental temperature | 25 °C  |
| Cooling fan               | ON     |

### DISCLAIMER:

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End-use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/ recycling practices of Polymaker materials for the intended application. Polymaker makes no warranty of any kind, unless announced separately, to the fitness for any use or application. Polymaker shall not be made liable for any damage, injury or loss induced from the use of Polymaker materials in any application.