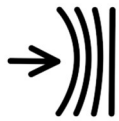## FLEX 98A

SMARTFIL® FLEX 98A is a thermoplastic polyurethane that has been additive to obtain a filament that allows printing flexible objects with a certain elasticity, being easier to print than other more common flexible filaments, since it has a higher hardness with respect to these, so it works with a wide range of printers of all kinds, such as direct extrusion or bowden.

For certain applications, such as objects subjected to great stress or vibration, it can be a very useful material, in addition, very good adhesion between layers and a high impact resistance.

Flexible

Impact resistance

|  | VALUES |  | UNIT OF MEASUREMENT | STANDARD |
|---|---|---|---|---|
| **PHYSICAL PROPERTIES** |  |  |  |  |
| Chemical name | Polyurethane |  |  |  |
| Density |  |  | g/cm³ | ASTM D792 |

| **MECHANICAL PROPERTIES** [1] | XY PLAN | ZX PLAN |  |  |
|---|---|---|---|---|
| Tensile strength | - | - | MPa | ISO 527 |
| Traction module | - | - | MPa | ISO 527 |
| Flexion strength | - | - | MPa | ISO 178 |
| Flexion module | - | - | MPa | ISO 178 |
| Elongation at maximum effort | - | - | % | ISO 527 |
| Charpy Impact Force (without notch) | - | - | kJ/m2 | ISO 179 |
| Hardness | 98 |  | Shore A | ISO 7619-1 |

[1] Values obtained on printed specimens, nozzle 0,4 mm, rectilinear infill 100%,layer height 0,2mm. For more information please contact us by email at info@smartmaterials.com or visit our website www.smartmaterials3d.com

| **THERMAL PROPERTIES** |  |  |  |  |
|---|---|---|---|---|
| Thermal deflection temperature | - |  | ºC | ASTM E2092 |

| **PRINT PROPERTIES** |  |  |  |  |
|---|---|---|---|---|
| Printing temperature | 220-240 |  | ºC |  |
| Bed temperature | 0-60 |  | ºC |  |
| Layer fan | 60-80 |  | % |  |
| Flow | 100 |  | % |  |
| Layer height | ≥ 0. 1 |  | mm |  |
| Nozzle recommendations | ≥ 0. 2 |  | mm |  |
| Print speed | 20-35 |  | mm/s |  |

| SIZE | NET WEIGHT | GROSS WEIGHT | DIAMETER | COLOR | PACKAGING |
|---|---|---|---|---|---|
| M | 750g | 975g | 1.75mm/2.85mm | Several | ZIP Closing Bag |

NOTICE: The information provided in the data sheets is intended to be for reference only. It should not be used as design values or quality control. Actual values can differ significantly depending on printing conditions. The final performance of printed components not only depends on the materials, design and printing conditions are also important.