

Data Sheet: FDM-ULTEM® 1010

DEFAULT INFILL: SOLID

THERMAL PROPERTIES

Property	Unit	Value	Norm
Dimensional stability in heat, at 4.6 bar	°C	214.1	ASTM D648, Method B
Dimensional stability in heat, at 18.2 bar	°C	212.2	ASTM D648, Method B
Glass transition temperature Tg	°C	209.37	ASTM D7426

MECHANICAL PROPERTIES

Property	Unit	Value	Norm
Tensile strength ⁱ	MPa	28 - 79	ASTM D638
Tensile modulus ⁱ	MPa	3000 - 3040	ASTM D638
Elongation at Break ⁱ	%	1 - 4	ASTM D638
Flexural Modulus	MPa	2600 - 2900	ASTM D790, A
Notched IZOD Impact Strength	J/m	21.8 - 26.6	ASTM D256, ASTM D4812
Unnotched IZOD Impact Strength	J/m	68 - 260	ASTM D256, ASTM D4812

PHYSICAL PROPERTIES

Property	Unit	Value	Norm
Density	g/cm ³	1.29	ASTM D257
UL Flammability		V0-Blue card	ANSI/UL 746B

TOLERANCES

Property	Unit	Value As Built
Achievable Part Accuracyⁱⁱ	mm %	+/- 0.4 mm for parts up to 100 mm +/- 0.4 % for beyond 100 mm
Min. Wall Thickness	mm	1.2

AVAILABLE FINISHES WITH PROPERTIES DEFINED IN THIS DATA SHEET

1 | STANDARD

As built with support structure removal

AVAILABLE FINISHES FOR SURFACE REQUIREMENTS

2 | SANDED

As built with support structure removal with additional manual sanding to achieve a homogeneous, smooth surface roughness. Surfaces that require sanding should be specified on the technical drawing or in the comment field on the MakerVerse platform.

3 | SEALED

As built with support structure removal with additional sealing to achieve air- and watertight geometries.

4 | SMOOTHED

As built with support structure removal with additional chemical smoothing to achieve a homogeneous, smooth surface roughness.

AVAILABLE FINISHES FOR COLOR REQUIREMENTS

5 | PAINTED

As built with support structure removal with a color of choice applied to the part. Surfaces that require painting and the RAL color code should be specified on the technical drawing or in the comment field on the MakerVerse platform.

AVAILABLE COMBINATIONS OF FINISHES

Many finishes can be combined or tuned to specific requirements. Please select "custom" in the "finish" dropdown on the MakerVerse platform and specify your requirements to request a quote for alternative finishing options.

MAXIMUM BUILD CHAMBER SIZE

914 MM X 610 MM X 914 MM

Warranty/Disclaimer: The data from finished parts can deviate from above values depending on the manufacturing process and the component geometry. The data represents our present empirical values. It is incumbent on the person placing the order to examine whether it is suitable for its intended purpose, before using the product.

ⁱ Depending on build direction

ⁱⁱ As a result of the part's geometry, strong tensions may cause distortion in the part which may lead to greater deviation.