



## Zetamix Black Zirconia datasheet

### PRODUCT DESCRIPTION

**Zetamix Black Zirconia** is a 3%<sub>mol</sub> stabilized zirconia filament used for 3D printing. The binders mixed with zirconia powder enables to have a flexible and resistant filament usable with classical FFF printers (Fused Filament Fabrication). Printed parts need to be debinded and sintered.

Diameter available: 1,75mm and 2,85mm

Postprocess : debinding and sintering

### IDENTIFICATION

Trade name	Zetamix Zirconia
Chemical name of raw material	3Y-TZP
Binding proportion (vol) %	50%
Binding proportion (mass) %	15%
Zirconia proportion (vol) %	50%
Zirconia proportion (mass) %	85%

## PRINTING AND SINTERING RECOMMANDATION

Printing temperature	170°C
No solvent debinding	-
Sintering temperature	1300°C, under hydrogenated argon
Shrinkage	23%
Density	98-99%

## TYPICAL MATERIEL PROPERTIES

Physical property	Typical value
Specific Gravity [g/cm <sup>3</sup> ]	3,5
MFR [g/10(min)]	14
MVR [cm <sup>3</sup> /10(min)]	50
Moisture Absorption 24 hours [%]	<0,1%
Moisture Absorption , 7 days [%]	<0,3%
Shor D	45

## MECHANICAL PROPRTIE ON TESTING SPECIMEN

Hardness GPA → 19

Bending strenght → 1600 à 1000 MPa

Disclaimer : The results presented above are for information and do not constitute a legally binding Material Safety Data sheet (MSDS). Moreover, values are significantly dependent on printing setting, debinding parametters , operators experience and surrounding conditions. Any descriptions, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product.