



## 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	ZrO <sub>2</sub> · Y <sub>2</sub> O <sub>3</sub>
Binding proportion (vol) %	50
Binding proportion (mass) %	15
Zirconia proportion (vol) %	50
Zirconia proportion (mass) %	85

## PRINTING AND SINTERING RECOMMANDATIONS

Printing temperature	170°C
Solvent debinding	Acetone
Sintering temprature	1475°C under air
Shrinkage	21,5% (x and y) ; 21,1% (z)
Density	98-99%

## TYPICAL PROPERTIES OF THE FILAMENT

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 PROPERTIES ON FINAL PART

Hardness GPA → 10

Bending strenght → 400 to 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 and debinding parameters , 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.