



Zetamix UHTC datasheet

PRODUCT DESCRIPTION

Zetamix UHTC is a filament used for 3D printing. The binders mixed with a blend of ZrB_2 , SiC and B_4C powder enables to have a flexible and resistant filament usable with standard FFF printers (Fused Filament Fabrication). Printed parts need to be debinded and sintered.

Diameter available: 1.75 mm

Post-process: chemical debinding and sintering

IDENTIFICATION

Trade name	Zetamix UHTC
Chemical symbol	ZrB_2 (77%), SiC (19%) and B_4C (4%)
Binder system proportion $_{\text{vol}}\%$	50%
Binder system proportion $_{\text{wt}}\%$	16,5%
UHTC proportion $_{\text{vol}}\%$	50%
UHTC proportion $_{\text{wt}}\%$	83,5%

PRINTING AND SINTERING RECOMMANDATION

Printing temperature	140°C
Solvent debinding	Acetone
Sintering temprature	2000°C – 2100°C under partial argon pressure (100mBar)
Shrinkage	20% ± 1% (x, y) 21%± 1% in z
Density	90-95%

TYPICAL PROPERTIES OF FILAMENTS

Specific Gravity [g.cm ⁻³]	3.05
Melt Flow Index [g/10(min)] (@135°C, 5kg, half-die)	78
Melt Volume Rate [cm ³ /10(min)]	25.6

SINTERED PROPERTIES

Sintered density → 4,8 – 4,9 g.cm³

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 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.