Zetamix Alumina datasheet

PRODUCT DESCRIPTION

Zetamix Alumina is an alumina filament used for 3D printing. The binders mixed with alumina 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: 1.75 mm and 2.85 mm
Post-process: debinding and sintering

IDENTIFICATION

Trade name	Zetamix Alumina
Chemical symbol	Al_2O_3
Binder system proportion $_{vol}$%	48
Binder system proportion $_{wt}$%	17
Alumina proportion $_{vol}$%	52
Alumina proportion $_{wt}$%	83

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PRINTING AND SINTERING RECOMMANDATIONS

Printing temperature	150°C
Solvant debinding	Acetone
Sintering temprature	1550°C under air
Shrinkage	19,7% (x and y) ; 19,3% (z)
Density	98-99%

TYPICAL PROPERTIES OF THE FILAMENT

Specific Gravity [$g.cm^{-3}$]	2,5
Melt Flow Rate [g/10(min)]	200
Melt Volume Rate [cm^3/10(min)]	80
Moisture Absorption 24 hours [%]	<0,1%
Moisture Absorption , 7 days [%]	<0,3%
Shore D hardness	40

MECHANICAL PROPERTIES ON FINAL PART

Hardness (Hv10) GPa ➔ 19
Bending strength ➔ 200 to 500 MPa

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