Zetamix Silicon Carbide Datasheet

PRODUCT DESCRIPTION

SiC Zetamix filament is a filament used for 3D printing. The binders mixed with SiC 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
Postprocess : chemical debinding and sintering

IDENTIFICATION

Trade name	Zetamix Silicon Carbide
Chemical name of raw material	SiC
Binding proportion (vol) %	48
Binding proportion (mass) %	22
SiC proportion (vol) %	52
SiC proportion (mass) %	78

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ζetamix by NANOE

PRINTING AND SINTERING RECOMMANDATIONS

Printing temperature	120-130°C
Debinding	Acetone
Sintering temperature	2200°C under partial vacuum (Ar 90 mb)
Shrinkage	16.8% (x and y) ; 22,6% (z)
Density	98-99%

TYPICAL PROPERTIES OF THE FILAMENT

Specific Gravity [$g.cm^{-3}$]	2.20
Melt Flow Index [g/10(min)] (@170°C, 5kg, half-die)	7
Melt Volume Rate [cm^3/10(min)]	3.2

MECHANICAL PROPERTIES ON FINAL PART

Hardness (Hv10) GPa➔ 25
Bending strength ➔ 400 Mpa

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