



## Zetamix H13 steel datasheet

### PRODUCT DESCRIPTION

**Zetamix H13 steel** is a filament used for 3D printing. The binders mixed with H13 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: thermal debinding and sintering

### IDENTIFICATION

Trade name	Zetamix H13 steel
Other designation	X40CrMoV5-1
Binder system proportion $_{vol}\%$	48
Binder system proportion $_{wt}\%$	10
H13 steel proportion $_{vol}\%$	52
H13 steel proportion $_{wt}\%$	90

## PRINTING AND SINTERING RECOMMANDATION

Printing temperature	180°C – 190°C
No chemical debinding	-
Sintering temperature	1350°C under Ar/H <sub>2</sub> (97.5/2.5) gas
Shrinkage	≈ 17%. The values depend on the batch number you can read on the spool. Please refer to the guidelines to find the correct values for the batch you have.
Density	90-91%

## TYPICAL PROPERTIES OF FILAMENTS

Specific Gravity [g.cm <sup>-3</sup> ]	4.5
Melt Flow Rate [g/10(min)] (180°C - 875g – half die)	3,5
Melt Volume Rate [cm <sup>3</sup> /10(min)] ( 180°C - 875g – half die)	0,8
Moisture Absorption 24 hours [%]	<0,1%
Moisture Absorption 7 days [%]	<0,3%
Shore D hardness	50

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.