

# Data Sheet: Hastelloy X<sup>i</sup>

## Alternative Designations

Standard	Din	ASTM	UNS	JIS	SIS	UNE
Designation	-	-	N06002	-	-	-

## Chemical Composition

Element	Ni	Cr	Fe	Mo	W	Mn	Ti	AL	Cu	C	Si	Co	B
Percentage	Balan ce	20.5- 23	17- 20	8 - 10	0.2 - 1	0- 1	0 - 0.15	0 - 0.5	0- 0.5	0 - 0.1	0 - 1	0.5 - 2.5	0 - 0.01

## Properties as built

Property	Yield Strength R <sub>p</sub> 0.2% [MPa] <sup>ii</sup>	Ultimate Tensile Strength R <sub>m</sub> [MPa] <sup>ii</sup>	Elongation at Break [%] <sup>ii</sup>	Young's Modulus [GPa] <sup>ii</sup>	Relative Density [%]
Value	520 - 695	660 - 890	25 - 40	155 - 255	>99.5%

## Properties heat treated

Property	Yield Strength R <sub>p</sub> 0.2% [MPa] <sup>ii</sup>	Ultimate Tensile Strength R <sub>m</sub> [MPa] <sup>ii</sup>	Elongation at Break [%] <sup>ii</sup>	Young's Modulus [GPa] <sup>ii</sup>	Relative Density [%]
Value	345- 435	675 - 750	40 - 48	190- 250	>99.5%

## Tolerances

Property	Value as built	Unit
Achievable Part Accuracy <sup>iii</sup>	+/- 0.2 mm for parts up to 50 mm +/- 0.3 mm for parts 50-150 mm +/- 0.5 mm for parts 150-250mm +/- 1.5 mm for parts 250-500mm	mm
Min. Wall thickness <sup>iii</sup>	0.8	mm

# MakerVerse

## Roughness

Roughness for vertical or quite vertical surfaces with standard sandblasting 8-10 um Ra.

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<sup>i</sup> The data from finished parts can deviate from above values depending on the manufacturing process and the component geometry. The data represents our present empirical values. It is incumbent on the person placing the order to examine whether it is suitable for its intended purpose, before using the product. The default postprocessing for this material is support removal and blasting.

<sup>ii</sup> Depending on build direction

<sup>iii</sup> Accuracy and wall thickness are pure references. They are heavily dependent on parts geometry and features orientation.