

Data Sheet: Inconel 718ⁱ

Alternative Designations

Standard	Din	ASTM	UNS	JIS	SIS	UNE
Designation	2.4668	B637	NO7718	-	-	-

Chemical Composition

Element	Ni	Cr	Ta+Nb	Mo	Ti	Al	Cu	C	Si	Co
Percentage	50-55	17-21	4.75-5.50	2.8-3.3	0-0.65	0-0.2	0-0.3	0-0.08	0-0.35	0-1.00

Properties

Stress relieved

Property	Yield Strength R _p 0.2% [MPa] ⁱⁱ	Ultimate Tensile Strength R _m [MPa] ⁱⁱ	Elongation at Break [%] ⁱⁱ	Young's Modulus [GPa] ⁱⁱ	Relative Density [%]
Value	490-770	870-1050	>23	154-188	>99.5%

Tolerances

Property	Value as built	Unit
Achievable Part Accuracyⁱⁱⁱ	+/- 0.3 mm for parts up to 100 mm +/- 0.3 % for parts beyond 100 mm	mm/ %
Min. Wall thickness	0.8	mm

ⁱ 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, stress relieving and blasting.

ⁱⁱ Depending on build direction

ⁱⁱⁱ As a result of the part's geometry, strong tensions may cause distortion in the part which may lead to greater deviation.