



## Inconel Alloy 718

*Inconel Alloy 718 ® is an alloy containing high levels of nickel, chromium and molybdenum. It is one of the most popular nickel based super alloys and is widely used because of its excellent resistance to corrosive environments, such as crevice corrosion and pitting. Inconel Alloy 718 is intended to show outstandingly high yield, tensile strength, and creep-rupture properties at temperatures up to 1300°F.*

*Inconel Alloy 718 is used a great deal in extreme environments, such as high-speed airframe parts, cryogenic storage parts, nuclear reactors, chemical processing, and gas turbine engine parts. Alloy 718 is used in these environments because of its high strength and ability to perform excellently at high temperatures.*

### Inconel Alloy 718 Grades & Equivalents:

- API6A718
- ASTM B637
- AMS 5662
- AMS 5663
- UNS N07718
- ASTM B670
- Werkstoff 2.4668

### Typical Chemical Analysis

<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Cr</b>	<b>Ni</b>	<b>Mo</b>
0.08	0.35	0.35	0.015	0.015	17.0-21.0	50.0-55.0	2.8-3.30
<b>W</b>	<b>N</b>	<b>Cb/Nb</b>	<b>Ti</b>	<b>Co</b>	<b>Cu</b>	<b>Al</b>	<b>B</b>
			0.65-1.15	1.0	0.30	0.20-0.80	0.006
<b>V</b>	<b>Fe</b>	<b>Mg</b>	<b>Ta</b>	<b>Ca</b>	<b>O</b>	<b>Bi</b>	<b>Se</b>
	Balance						
<b>Sn</b>	<b>Zn</b>	<b>Pb</b>	<b>Y</b>	<b>Cb/Nb + Ta</b>	<b>Ni + Co</b>	<b>H</b>	<b>PREN</b>
				4.75-5.50			

### Typical Mechanical Properties

Tensile Strength	1275 N/mm <sup>2</sup> min
0.2% Proof Stress	1034 N/mm <sup>2</sup> min
Elongation	12%
Reduction of Area	15%
Hardness	331 HBw min
Impacts	
Stress Rupture	649°C @ 690 MPa for 23 Hours, 5% Elongation min
Other Remarks	<i>Mechanical and stress rupture requirements (if applicable) may vary depending on specification ordered. Above stated requirements are that of ASTM B637</i>

### Product Forms Available:

- Hexagon Head Bolts
- Hexagon Nuts
- Studbolts
- Socket Capscrews
- Socket Countersunk Screws
- Socket Setscrews
- & Many other special fasteners and bespoke machined parts

*Products can be produced to customer drawings or relevant British (BS), American (ASME, ANSI), European (DIN, UNI) or International Standards (ISO).*

*The size ranges M3 to M120 Metric and 3/16" to 4.75" Imperial can be supplied. Thread forms include UNC, UNS, UNF, BSW, BSF, Whitworth, Metric, Metric Fine.*



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