

## AMS 5596, AMS 5597, NICKEL ALLOY 718 SHEET & PLATE

Alloy 718 (alternatively known by Special Metals trade name Inconel 718) AMS 5596, AMS 5597, is a nickel chromium alloy which can be heat treated to give high strength, good corrosion resistance and is readily fabricated into complex parts with a very good resistance to postweld cracking. Alloy 718 can work effectively between -423 to 1300 deg F.

Specific Gravity															
7.98 g/cm3															
Typical Applications								Related Specifications							
Exhausts  Liquid rocket components involving cryogenic temperatures								<b>AMS 5596</b>  <b>AMS 5597</b>  <b>UNS N07718</b>  <b>ASTM B670</b>							
Chemical Composition (Wt %)															
	Ni	Cr	Fe	Mo	Nb+Ta	C	Mn	Si	Ph	S	Ti	Cu	B	Al	Co
Min	50	17	Bal	2.8	4.75	–	–	–	–	–	0.65	–	–	0.20	–
Max	55	21	–	3.3	5.50	0.08	0.035	0.35	0.015	0.015	1.15	0.30	0.006	0.80	1.00
Mechanical Properties in the annealed condition															
											0.2% Proof Stress	Tensile Strength	Elongation		
											MPA	MPA	%		
											Max	Max	Min		
<b>Sheet and strip</b>											550	965	30		
<b>Plate</b>											725	1035	30		
Mechanical Properties in the solution treated and precipitation heat treated condition															

0.2% Proof Stress	Tensile Strength	Elongation
MPA	MPA	%
Min	Min	Min
1035	1240	12

\* This data has been supplied in good faith and is indicative only. It has been provided for general information purposes only and is not to be relied upon in place of the full specification. Mechanical properties can vary considerably with different supply conditions such as heat treatment or temper and product dimensions.

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## General Enquiries

T: +44 (0) 1525 217 556 [\(tel:+4401525217556\)](tel:+4401525217556)

E: [sales@dynamicmetalsltd.com](mailto:sales@dynamicmetalsltd.com) [\(mailto:sales@dynamicmetalsltd.com\)](mailto:sales@dynamicmetalsltd.com)



## UK Address:

### Head Office

40 Eden Way  
 Chartwell Business Park  
 Leighton Buzzard  
 Bedfordshire  
 LU7 4FY

T: +44 (0)1525 217 556 [\(tel:+441525217556\)](tel:+441525217556)

### Conversion Centre

Suite 2 Meadowhall Riverside  
 Meadowhall Road  
 Sheffield  
 South Yorkshire  
 S9 1BW

T: +44 (0)1143 030 320 [\(tel:+4401143030320\)](tel:+4401143030320)

### Registered Office (only)

The Granary  
 Crowhill Farm Ravensden Road

Wilden  
Bedfordshire  
MK44 2QS

T: +44 (0)1525 217 556 [\\_\(tel:+441525217556\)](tel:+441525217556)



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