

# AMS 5662, AMS 5663 | Nickel Alloy 718 Bar

## *Typical Applications*

Land based gas turbine engines

Jet Engines

Fasteners

Instrumentation parts

Mandrels

Well head completion equipment



*Alloy 718 (alternatively known by Special Metals trade name Inconel 718), is a nickel chromium alloy (AMS 5662, AMS 5663) 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.

## **Related Products**

**Alloy 200 201**

**Alloy 625 Bar**

**Alloy 625 Sheet And Plate**

**Alloy 718 Bar**

**Alloy 718 Sheet Plate**

**Alloy 75**

**Alloy 80A**

**Alloy X750**

**Alloy X Bar**

**Alloy X Sheet Plate**

**C263**

**Mp159 R Bar**

**Mp35N R**

**Rene 41**

**Waspaloy**

**Alloy 90**

**Alloy 901**

## **Technical specification**

### *Related Specifications*

**AMS 5662**

**AMS 5663**

**UNS N07718**

**ASTM B637**

**W.Nr 2.4668**

**MSRR 7114**

MSRR 7115

NACE MR0175

*Specific Gravity*

7.98 g/cm<sup>3</sup>

*Chemical Composition (WT %)*

|              | Min  | Max    |
|--------------|------|--------|
| <b>Ni</b>    | 50   | 55     |
| <b>Cr</b>    | 17   | 21     |
| <b>Fe</b>    | Bal  | -      |
| <b>Mo</b>    | 2.8  | 3.3    |
| <b>Nb+Ta</b> | 4.75 | 5.50   |
| <b>C</b>     | -    | 0.08   |
| <b>Mn</b>    | -    | 0.035  |
| <b>Si</b>    | -    | 0.35   |
| <b>Ph</b>    | -    | 0.015  |
| <b>S</b>     | -    | 0.015  |
| <b>Ti</b>    | 0.65 | 1.15   |
| <b>Cu</b>    | -    | 0.30   |
| <b>B</b>     | -    | 0.0006 |

|           |      |      |
|-----------|------|------|
| <b>Al</b> | 0.20 | 0.80 |
| <b>Co</b> | -    | 1.00 |

*Mechanical Properties in Solution Annealed and Aged Condition for Aerospace bar*

|                          |     |     |      |
|--------------------------|-----|-----|------|
| <b>0.2% Proof Stress</b> | MPA | Min | 1034 |
| <b>Tensile Strength</b>  | MPA | Min | 1275 |
| <b>Elongation</b>        | %   | Min | 12   |
| <b>Reduction of area</b> | %   | Min | 15   |
| <b>Hardness</b>          | HB  | Min | 331  |

*Mechanical Properties in Solution Annealed and Aged Condition for Oil patch bar*

|                          |     |     |      |
|--------------------------|-----|-----|------|
| <b>0.2% Proof Stress</b> | MPA | Min | 827  |
| <b>Tensile Strength</b>  | MPA | Min | 1034 |
| <b>Elongation</b>        | %   | Min | 17   |
| <b>Reduction of area</b> | %   | Min | 25   |
| <b>Hardness</b>          | HB  | Min | 40   |

