

DATA SHEET

ALLOY 718 | 2.4668

Major specifications

UNS N07718 | AMS 5662 | AMS 5663 | ASTM B637 | AMS 5596 | ASTM B670 | DMD 424 - 22

Product forms

Round bars in AMS 5662

Round bars in AMS 5663

Sheets and plates

The current Stock Range can be found on www.sd-metals.com. Further dimensions available upon request.

Key features

Alloy 718 is a precipitation hardened nickel-chromium alloy with additions of niobium, molybdenum, aluminum and titanium for improved corrosion resistance combined with extremely high strength and excellent weldability, including resistance to cracking after welding. Alloy 718 has excellent creep rupture strength at temperatures up to 700 °C. Alloy 718 achieves its strength through a precipitation hardening heat treatment and can be supplied in a ready-to-anneal solution to facilitate processing, after which it is heat treated to achieve full strength, or the material can be supplied in the fully precipitation-hardened state.

Areas of application

Gas turbine compressor blades, disks and shafts; high strength springs; high strength fasteners; pumps and valves.

CHARACTERISTIC

Chemical composition limits in %

Fe	Rest
Ni	50,00 - 55,00
Cr	17,00 - 21,00
Ti	0,65 - 1,15
Nb	4,75 - 5,50
Mo	2,80 - 3,30
Co	max. 1,00
Mn	max. 0,35
Al	0,20 - 0,80
C	max. 0,08

Physical constants and thermal properties

Density	8,19 g/cm ³
Melting point	1260 - 1336 °C
Thermal conductivity	9,5 W/m • °C
Coefficient of expansion at 21-93 °C	13 µm/m • °C

Typical mechanical properties (room temperature)

AMS 5663	
Yield strength	min. 1034 MPa
Tensile strength	min. 1275 MPa
Elongation	min. 12 %
AMS 5596	
Yield strength	min. 1034 MPa
Tensile strength	min. 1240 MPa
Elongation	min. 12 %

All information is subject to change without notice.
The properties correspond to the material in the heading. They may vary for other specifications. Please contact us for more details.

Do you have any questions? Contact us:

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