

AM 718 Data Sheet

AM 718 is a gamma prime strengthened, nickel based superalloy. AM 718 exhibits corrosion resistance as well as excellent mechanical properties from cryogenic up through elevated temperatures.

Alloy Highlights

- Good Mechanical properties
- Excellent welding characteristics
- Good oxidation resistance
- Good corrosion resistance

Typical Applications

- Gas Turbine Components
- Liquid Fuel Rocket Components
- Cryogenic Tanks
- Down Hole Oil Well Equipment

Mechanical Properties (as Sintered)		
Test	Horizontal	Vertical
Tensile Strength	152 +/-7 ksi	140 +/-8 ksi
Yield Strength	110 +/-10 ksi	91 +/-8 ksi
Elongation at break	25 +/-5 %	30 +/-5 %
Hardness (HRC)	30	
Density (lb/in ²)	0.294	
E Modulus (Msi)	23 +/-3	

Chemistry		
Element	Range (%)	
	Min	Max
Al	0.30	0.70
B		0.006
Ca		0.01
C	0.02	0.08
Cr	17.00	21.00
Co		1.00
Nb+Ta	4.75	5.50
Cu		0.30
Fe	15.00	21.00
Mg		0.01
Mn		0.35
Mo	2.80	3.30
Ni	50.00	55.00
P		0.015
Se		0.005
Si		0.35
S		0.015
Ti	0.75	1.15

Applicable Chemistry Specifications

- | | | |
|----------|-----------|------------|
| AMS 5662 | B50TF202 | DIN 2.4668 |
| AMS 5596 | B50A918 | UNS N07718 |
| AMS 5832 | ASTM B537 | ASTM B670 |