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ALLOY 718 – UNS N07718

APPLICABLE SPECIFICATIONS

API6A CRA ASTM B637 NACE MR-0175/ISO 15156

A precipitation hardenable nickel based alloy. A high strength, good corrosion resistance, excellent weldability and good formability over a wide temperature range.

CHEMICAL ANALYSIS RANGE (WT%) AS PER API6A CRA

Ni	50.00 - 55.00	C	0.045 Max	Cu	0.23 Max
Cr	17.00 - 21.00	Co	1.00 Max	Pb	0.0010 Max
Fe	Balance	Mn	0.35 Max	Se	0.0005 Max
Nb (Cb) + Ta	4.87 - 5.20	Si	0.35 Max	Bi	0.00005 Max
Mo	2.80 - 1.15	P	0.010 Max	Ca	0.003 Max
Ti	0.80 - 1.15	S	0.010 Max	Mg	0.006 Max
Al	0.40 - 0.60	B	0.0060 Max		

HEAT TREATMENT

SQA bar stock is in the Solution Annealed and Aged condition to meet the requirements of NACE MR-0175/ISO15156 2nd Edition – 40 HRC Max. Other heat treatment conditions available on request.

TYPICAL MECHANICAL PROPERTIES IN SOLUTION ANNEALED & AGED CONDITION (AS PER API6A)

0.2% Yield Strength	120000 PSI min
Tensile Strength	150000 PSI min
Elongation	20% min
Reduction of Area	35% min
Hardness	40 HRC Max
Charpy V Notch @ -60 DEG C	68 Joules min average (Longitudinal)
(For sections up to 10")	47 Joules min average (Transverse)
(For sections above 10")	41 Joules min average (Transverse)

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