

Nimonic 80A, Nickel Alloy 80A

Alloy 80A (alternatively known by Special Metals trade name Nimonic 80A) is a nickel chromium alloy similar to Alloy 75 but made precipitation hardenable by additions of aluminium and titanium. Alloy 80A has good corrosion and oxidation resistance and high tensile and creep rupture properties at temperatures up to 1500 deg F.

Specific Gravity													
8.19 g/cm ³													
Typical Applications							Related Specifications						
Bolts Exhaust valves Gas turbine components Tube supports in nuclear steam generators							BS 3076 (NA20) BS HR1 BS HR601 ASTM B637 UNS N07080 MSRR 7011 W.Nr 2.4952 W.Nr 2.4631 DIN 17742						
Chemical Composition (Wt %)													
	Ni	Cr	Fe	C	Mn	Si	S	Ti	Al	Cu	B	Zr	Co
Min	Bal	18	–	–	–	–	–	1.8	1.0	–	–	–	–
Max	–	21	3.0	0.10	1.0	1.0	0.015	2.7	1.8	0.2	0.008	0.15	2.0
Typical Mechanical Properties													
0.2% Proof Stress					Tensile Strength		Elongation		Reduction of area		Hardness		
MPA					MPA		%		%		HV		
Min					Min		Min		Min		Min		

620	1000	20	12	300
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* 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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