



INCONEL® X-750



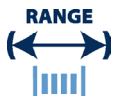
Key Features

- Good creep rupture strength at high temperatures
- Very good at cryogenic temperatures
- Age hardenable
- ^^High temperature dynamic applications

IMPORTANT

We will manufacture to your required mechanical properties.

key advantages to you, our customer



0.025mm to 21mm
(.001" to .827")



Order 3m to 3t
(10 ft to 6000 Lbs)



Delivery:
within 3 weeks



Wire to your spec



E.M.S available



Technical support

INCONEL® X-750 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

Packaging

- Coils
- Spools
- Bars or lengths



*Trade name of Special Metals Group of Companies.

INCONEL® X-750



Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	AMS 5667 AMS 5671 AMS 5698 (No 1 Spring Temper) AMS 5699 (Spring Temper) ASTM B637 BS HR 505 GE B14H41 ISO 15156-3 (NACE MR 0175)	Good creep rupture strength at high temperatures Not as strong as Nimonic 90 Very good at cryogenic temperatures Age hardenable ^^High temperature dynamic applications	Nuclear reactors Gas turbines Rocket engines Pressure vessels Aircraft structures
C	-	0.08			
Mn	-	1.00			
Si	-	0.50			
S	-	0.01			
Cr	14.00	17.00			
Ni	70.00	-			
Nb/Cb	0.70	1.20			
Ti	2.25	2.75			
Designations					
Al	0.40	1.00			
Fe	5.00	9.00			
Co	-	1.00			
Ta	-	0.05			
Cu	-	0.50			
			W.Nr. 2.4669 UNS N07750 AWS 014		

Density	8.28 g/cm ³	0.299 lb/in ³
Melting Point	1430 °C	2600 °F
Coefficient of Expansion	12.6 µm/m °C (20 – 100 °C)	7.0 x 10 ⁻⁶ in/in °F (70 – 212 °F)
Modulus of Rigidity	75.8 kN/mm ²	10994 ksi
Modulus of Elasticity (Spring Temper + Aged)	218.0 kN/mm ²	31619 ksi
(Spring Temper + 3 Part Heat Treated)	212.4 kN/mm ²	30806 ksi
(No.1 Spring Temper + Aged)	213.7 kN/mm ²	30995 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	Type	Temperature		Time (Hr)	Cooling
		°C	°F		
Spring Temper	Age Harden	650	1200	4	Air
Spring Temper (3 Part)	Anneal	1150	2100	2 ★★	Air
	Stabalize	843	1550	24	Air
	Age Harden	704	1300	20	Air
No. 1 Temper	Age Harden	730	1350	16	Air

Properties				
Condition	Approx. tensile strength		Approx. operating temperature depending on load^^ and environment	
	N/mm ²	ksi	°C	°F
Annealed	<1000	<145	-	-
No. 1 Temper	900 – 1150	130 – 167	-	-
Spring Temper	1100 – 1500	160 – 218	-	-
No. 1 Temper + Aged	1150 – 1450	167 – 210	-200 to +550	-330 to +1020
Spring Temper + Aged	1350 – 1750	196 – 254	-200 to +370	-330 to +700
Spring Temper + 3 part heat treated	>1030	>149	-200 to +550	-330 to +1020

The above tensile strength ranges are typical. If you require different please ask.

★★ for diameters below 1.00mm contact AWI Technical department ^^Dynamic applications = active/lively/changing