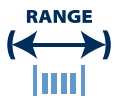**alloy wire** international

WASPALOY

> ## Key Features

Very high strength at elevated temperatures

Strength is generally comparable to that of Rene 41 and generally superior to Inconel 718

Age hardenable

^^High temperature dynamic applications

IMPORTANT
We will manufacture to your required mechanical properties.

WASPALOY available in:-

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

Packaging

- Coils
- Spools
- Bars or lengths

key advantages to you, *our customer*

RANGE

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

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

DELIVERY
3 WEEKS

Delivery:
within 3 weeks

Wire to your spec

E.M.S available

HOW CAN I HELP?
Technical support

Manufacturing quality, delivering reliability | **alloywire.com**

Chemical Composition		
Element	Min %	Max %
C	0.02	0.10
Mn	-	0.10
Si	-	0.10
P	-	0.010
S	-	0.010
Cr	18.00	21.00
Co	12.00	15.00
Mo	3.50	5.00
Ti	2.75	3.50
Al	1.20	1.60
B	0.003	0.010
Zr	-	0.04
Fe	-	2.00
Cu	-	0.10
Ni	BAL	

Specifications

AMS 5544
AMS 5706
AMS 5708
AMS 5828
ASTM B637

Designations

W.Nr. 2.4654
UNS N07001
AWS 170

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Typical Applications

Gas turbine engine parts

Aerospace components

Springs and fasteners

Property	Value	Value
Density	8.16 g/cm³	0.295 lb/in³
Melting Point	1330 ℃	2425 °F
Coefficient of Expansion	12.2 µm/m ℃ (20 – 100 ℃)	6.8 x 10⁻⁶ in/in °F (70 – 212 °F)
Modulus of Rigidity	81 kN/mm²	11750 ksi
Modulus of Elasticity	211.0 kN/mm²	30600 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	**Type**	**Temperature**		**Time (Hr)**	**Cooling**
		°C	**°F**		
Annealed	Stabilize	843	1550	4	Air
	Age Harden	760	1400	16	Air
Spring Temper	Anneal	1050	1920	4	Air
	Stabilize	843	1550	4	Air
	Age Harden	760	1400	16	Air

Properties				
Condition	**Approx. tensile strength**		**Approx. operating temperature depending on load^^ and environment**	
	N/mm²	**ksi**	**°C**	**°F**
Solution Annealed	<1100	<159	-	-
Solution Annealed + Aged	1300 – 1500	189 – 218	up to +550	up to +1020
Spring Temper	1300 – 1600	189 – 232	-	-
Spring Temper + Annealed + Aged	1300 – 1500	189 – 218	up to +550	up to +1020

The above tensile strength ranges are typical. If you require different please ask.   ^^Dynamic applications = *active/lively/changing*

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AS 9100
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Quality Management

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Environmental

ISO 45001
Health & Safety