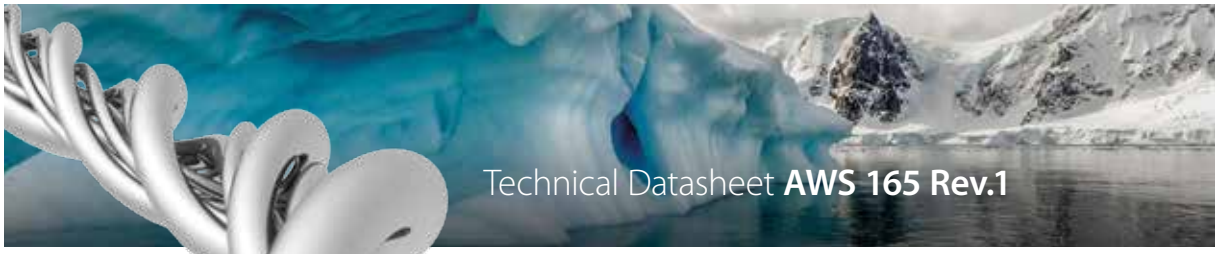


alloy wire international

NITRONIC** 50

Key Features

Superior corrosion resistance to type 316 stainless steel

Good mechanical properties at ambient and sub-zero temperatures

Does not become magnetic when cold worked or cooled to sub-zero temperatures

IMPORTANT
We will manufacture to your required mechanical properties.

key advantages to you, *our customer*

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

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

DELIVERY 3 WEEKS
Delivery:
within 3 weeks

Wire to your spec

E.M.S available

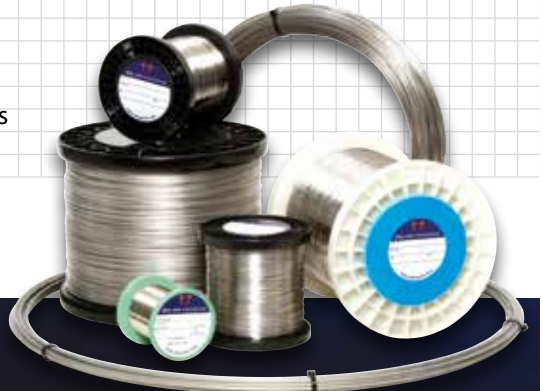
HOW CAN I HELP?
Technical support

NITRONIC** 50 available in:-

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

Packaging

- Coils
- Spools
- Bars or lengths



**Trade name of AK Steel.

Technical Datasheet **AWS 165 Rev.1**

NITRONIC** 50

alloy wire international

Chemical Composition		
Element	Min %	Max %
C	-	0.06
Si	-	1.00
Mn	4.0	6.0
Ni	11.5	13.5
Cr	20.5	23.5
S	-	0.03
P	-	0.04
Mo	1.5	3.0
N	0.20	0.40
V	0.10	0.30
Nb/Cb	0.10	0.30
Fe	BAL	

Specifications

ISO 15156-3
(NACE MR0175)

Designations

W.Nr. 1.3964
UNS S20910
AWS 165

Key Features

Superior corrosion resistance to type 316 stainless steel

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Typical Applications

Components in processing environments like:
- Marine
- Petroleum
- Petrochemical
- Fertilizer
- Pulp & Paper

Density	7.88 g/cm^3	0.285 lb/in^3
Melting Point	1415 – 1450 °C	2579 – 2642 °F
Coefficient of Expansion	16.2 µm/m °C (20 – 100 °C)	9.0 x 10^{-6} in/in °F (70 – 200 °F)
Modulus of Rigidity	78.9 kN/mm^2	11444 ksi
Modulus of Elasticity	196.5 kN/mm^2	28500 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	**Type**	**Temperature**		**Time (Hr)**	**Cooling**
		°C	**°F**		
Annealed or Spring Temper	Stress Relieve	250	480	1	Air

Properties				
Condition	**Approx. tensile strength**		**Approx. operating temperature**	
	N/mm^2	**ksi**	**°C**	**°F**
Solution Annealed	700 – 1000	102 – 145	-200 to +300	-330 to +570
Spring Temper	1300 – 2200	189 – 319	-200 to +300	-330 to +570

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

Narrowboat Way, Hurst Business Park, Brierley Hill, West Midlands, DY5 1UF, UK
t +44 (0)1384 262022 e sales@alloywire.com w alloywire.com