



NITRONIC** 50

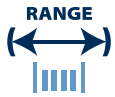
Key Features

- 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



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

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.

Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	ISO 15156-3 (NACE MR0175)	Superior corrosion resistance to type 316 stainless steel	Components in processing environments like: - Marine - Petroleum - Petrochemical - Fertilizer - Pulp & Paper
C	-	0.06			
Si	-	1.00	Designations	Good mechanical properties at ambient and sub-zero temperatures	
Mn	4.0	6.0	W.Nr. 1.3964 UNS S20910 AWS 165		
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				

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	<1000	<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.