

NI SPAN C-902[®]

Key Features

Outstanding controllable thermoelastic coefficient characteristics

Can be processed to have constant modulus of elasticity from -45 to +65 °C (-50 to +150 °F)

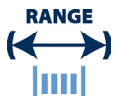
Good for springs in watches and weighing equipment

Age hardenable

IMPORTANT

We will manufacture to your required mechanical properties.

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

NI SPAN C-902[®] available in:-

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

Packaging

- Coils
- Spools
- Bars or lengths





Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	AMS 5225 AMS 5221 HS 261	Outstanding controllable thermoelastic coefficient characteristics Can be processed to have constant modulus of elasticity from -45 to +65 °C (-50 to +150 °F)	Springs in precise applications, such as watches and weighing machines Measuring instruments
C	-	0.06			
Mn	-	0.80	Designations UNS N09902 AWS 080	Good for springs in watches and weighing equipment Age hardenable	
Si	-	1.00			
P	-	0.04			
S	-	0.04			
Cr	4.90	5.75			
Ni+Co	41.00	43.50			
Ti	2.20	2.75			
Al	0.30	0.80			
Cr+ (Ti-4xC)	7.10	8.10			
Co	-	1.00			
Fe	BAL				

Density	8.05 g/cm ³	0.291 lb/in ³
Melting Point	1480 °C	2700 °F
Coefficient of Expansion	7.6 µm/m °C (20 – 100 °C)	4.2 x 10 ⁻⁶ in/in °F (70 – 212 °F)
Modulus of Rigidity	62 – 69 kN/mm ²	8993 – 10008 ksi
Modulus of Elasticity	165 – 200 kN/mm ²	23932 – 29008 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	Type	Temperature		Time (Hr)	Cooling
		°C	°F		
Spring Temper - for good all round properties	Age Harden	650	1200	2	Air
Spring Temper - for max stability	Stress equalise Age Harden	400	750	2	Air
		650	1200	2	Air
Spring Temper - for minimum hysteresis & low thermoelastic coefficient	Stress equalise	400	750	2	Air

Properties				
Condition	Approx. tensile strength		Approx. operating temperature	
	N/mm ²	ksi	°C	°F
Annealed	<800	<116	-45 to +65	-50 to +150
(for constant modulus applications)				
Spring Temper	900 – 1100	131 – 159	-45 to +65	-50 to +150
(for constant modulus applications)				
Spring Temper + Aged	1300 – 1500	189 – 218	-45 to +65	-50 to +150
(for constant modulus applications)				

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