

# MP35N

## Materials Data Sheet

### Description

MP35N is an age hardenable Nickel-Cobalt base alloy that has a unique combination of properties - ultra high strength, toughness, ductility and outstanding corrosion resistance. MP35N resists corrosion in hydrogen sulphide, salt water and other chloride solutions. It also has excellent resistance to crevice and stress corrosion cracking in sea water and other hostile environments. Suitable where a high combination of strength, high modulus values and good corrosion resistance are required.

### Chemical Composition

Element	%
C	0.025
P	0.015
Si	0.15
Ni	37.00
Mn	0.15
S	0.01
Cr	21.00
Mo	10.50
Ti	1.00
Fe	1.00
Co	Remaining

**Uses:** Common applications for MP35N is High Pulse Magnet Research, Aircraft and Aerospace components - Springs, leading edge strips, Oil & Gas Industry, Chemical and Marine equipment - high pressure door dogs, springs and valve components, Orthodontic and Prosthetic devices

<b>Density</b>	8.43g/cm <sup>3</sup>	0.304 lb/in <sup>3</sup>
<b>Melting Point</b>	1440°C	2625°F
<b>Coefficient of Expansion</b>	12.8 µm/m °C (20 - 100°C)	7.1 x 10 <sup>-6</sup> in/in °F (70 - 212°F)
<b>Modulus of Rigidity</b>	80.7 kN/mm <sup>2</sup>	11705 ksi
<b>Modulus of Elasticity</b>	234 kN/mm <sup>2</sup>	33939 ksi

### Heat Treatment

Condition	Type	Temperature	
		°C	°F
Spring Temper	Age Harden	650	1200

### Properties

Condition	Approximate Tensile Strength		Approximate Operating Temperature	
	N/mm <sup>2</sup>	ksi	°C	°F
Spring Temper and Aged	1900-2200	276-319	-200 to +315	-330 to +600

\*Information compiled using Alloy Wire International as source.

The information and data in this product data sheet are accurate to the best of our knowledge and belief, but are intended for general information only.

KB Delta  
MP35N