Hamilton Precision Metals
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TECHNICAL DATA SHEET

MP35N® - LTI

MP35N®-LTi is a nonmagnetic nickel-cobalt-chromium-molybdenum alloy that has excellent corrosion resistance, can obtain ultrahigh tensile strengths (300 ksi) through work hardening and aging, and has good toughness and ductility. Applications include electrical components, springs, and instrument parts in medical, chemical, food processing and marine environments.

NOMINAL COMPOSITION:

Nickel	35%	Titanium	.01%
Cobalt	33.5%	Iron	.5%
Chromium	20.5%	Carbon	.01%
Molybdenum	9.5%	Boron	.01%

TYPICAL MECHANICAL PROPERTIES:[1]

	Annealed	Cold Rolled	Cold Rolled & Heat Treated
Ultimate Tensile Strength	135,000 PSI	275,000 PSI	300,000 PSI
Yield Strength (.2% Offset)	57,000 PSI	240,000 PSI	290,000 PSI
Elongation in 2"+	40%	1%	1%
Rockwell Hardness	RB 94	RC 50	RC 55
Modulus of Elasticity	33.76 ksi x 10^3		

+The measured elongation will be less as thickness decreases to .002" and less

[1] These values may be adjusted by control of process variables – consult HPM for desired values.

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PHYSICAL PROPERTIES:[2]

Density ……0.304 lb/cu in
Melting Point (Approx.) ……..….2400°F
Electrical Resistivity @RT……..103 Microhm·cm
Thermal Expansion Coeffiecient (RT to 200 C)……..13.7 ppm/C
Thermal Conductivity @RT. ……..11.2 W/m·K
Magnetic Permeability @RT ……..1.0009

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GENERAL INFORMATION:

After work hardening, MP35N® alloy can be aged in the temperature range of 800/1200 F for increased strength. MP35N® will only respond to aging if in the work hardened condition. Service temperatures up to 750°F are recommended for work hardened material. MP35N® can be successfully TIG welded. MP35N® is produced by double vacuum melting, and as such, has a low nonmetallic inclusion level.

AVAILABILITY:

MP35N® is available from Hamilton Precision Metals as strip product in thicknesses from .0005" to .030", and widths to 5.0". A foil product is available in thicknesses down to .0001" and widths of 4.0". The material corresponds to UNS R30035.

[2] Typical values to guide alloy selection but are not a guarantee of minimum or maximum