



Hamilton Precision Metals
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TECHNICAL DATA SHEET

HPM 400

HPM 400 is a Nickel-Copper alloy with excellent corrosion resistant characteristics in marine environments.

NOMINAL COMPOSITION:

Nickel	65.0%	Manganese	1.0%
Copper	32.0%	Carbon	.01%
Iron	1.5%		

TYPICAL MECHANICAL PROPERTIES:¹

	<u>ANNEALED</u>	<u>COLD ROLLED</u>
Ultimate Tensile Strength	75,000 PSI	120,000 PSI
Yield Strength (.2% Offset)	30,000 PSI	100,000 PSI
Elongation in 2" *	35%	2%
Modulus of Elasticity (Tension)	26 X 10 ⁶ PSI	
Poisson's Ratio	0.32	

*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	-	0.319 lbs/cu.in.
Melting Point (Approx.)	-	1300°C
Electrical Resistivity @ R.T.	-	51 Microhm· cm
Thermal Expansion Coefficient (25° to 100° C)	-	13.9 x 10 ⁻⁶ / °C
Thermal Conductivity @ R.T.	-	21.8 W/m· k
Magnetic Attraction	-	None
Curie Temperature	-	10°C

GENERAL INFORMATION:

The alloy is readily formed from the annealed temper. It is easy to fabricate by conventional welding techniques.

AVAILABILITY:

HPM 400 is available from Hamilton Precision Metals as strip product in thicknesses from .0005" to .050" and widths up to 12.0" The material conforms to ASTM B127 and UNS N04400.

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