



HPM® 400 (UNS N04400)

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

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 0.0005" to 0.050" (0.0127 mm to 1.27 mm) and widths up to 12.0" (304.8 mm). The material conforms to ASTM B127 and UNS N04400.



Technical Data

TYPICAL MECHANICAL PROPERTIES ¹		
	ANNEALED	COLD ROLLED
Ultimate Tensile Strength	75,000 PSI	120,000 PSI
Yield Strength (0.2% 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 0.002" and less.

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

NOMINAL COMPOSITION	
Nickel	65.0%
Copper	32.0%
Iron	1.5%
Manganese	1.0%
Carbon	0.01%

PHYSICAL PROPERTIES ²	
Density	0.319 lbs./cu.in.
Melting Point (Approx.)	1300°C
Electrical Resistivity @ R.T.	51 Microhm · cm
Temperature Coefficient of Resistivity (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

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

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