Hamilton Precision Metals
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TECHNICAL DATA SHEET

HPM ® 600

HPM ® 600 is well suited for severe corrosive environments and is oxidation resistant through 2150°F. The strength can be increased by cold working. The material has good elevated strength retention through 800°F.

NOMINAL COMPOSITION:

Chromium	15.5%	Manganese	.4%
Iron	8.5%	Nickel	Balance

TYPICAL MECHANICAL PROPERTIES:[1]

	ANNEALED	COLD ROLLED
Ultimate Tensile Strength	90,000 PSI	170,000 PSI
Yield Strength (.2% Offset)	40,000 PSI	160,000 PSI
Elongation in 2" *	45%	2%
Modulus of Elasticity (Tension)	31.1×10^6 PSI	
Poisson's Ratio	0.327	

*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.

PHYSICAL PROPERTIES:[2]

Density	-	0.306 lbs./cu.in.
Melting Point (approx.)	-	1355°C
Electrical Resistivity @ R.T.	-	103 Microhm-cm
Temperature Coefficient of Resistivity (TCR)	-	150 ppm/°C
(25°C to 105°C)	-	
Thermal Expansion Coefficient (20°C to 315°C)	-	14.2 x 10^{-6}/°C
Thermal Conductivity @ R.T.	-	14.8 W/m· K
Curie Temperature	-	-124°C
Magnetic Permeability @ 200 oersteds	-	1.010
Magnetic Attraction	-	None
Specific Heat	-	.106 gram·cal./°C

GENERAL INFORMATION:

The alloy is readily formed in the annealed temper, and can be joined by the standard welding, brazing and soldering processes.

AVAILABILITY:

HPM 600 is available from Hamilton Precision Metals as strip product in thicknesses from .0005" to .050" and width up to 12". It is also available in foil as thin as .000100" in widths of 4.0" maximum. The material conforms to ASTM B168, AMS 5540, MIL N 23228 and UNS NO6600.

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