

HPM[®] 600



HPM[®] 600 (UNS NO6600)

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.

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 0.0005" to 0.050" (0.0127 mm to 1.27 mm) and width up to 12" (304.8 mm). It is also available in foil as thin as 0.000100" (0.00254 mm) in widths of 4.0" (101.6 mm) maximum. The material conforms to ASTM B168, AMS 5540, MIL N 23228 and UNS NO6600.



Technical Data

TYPICAL MECHANICAL PROPERTIES ¹		
	ANNEALED	COLD ROLLED
Ultimate Tensile Strength	90,000 PSI	170,000 PSI
Yield Strength (0.2% Offset)	40,000 PSI	160,000 PSI
Elongation in 2" *	45%	2%
Modulus of Elasticity (Tension)	31.1 X 10 ⁶ PSI	-
Poisson's Ratio	0.327	-

*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	
Chromium	15.5%
Iron	8.5%
Manganese	0.4%
Nickel	Balance

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) (25°C to 105°C)	150 ppm/°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	0.106 gram · cal./°C

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