



Hamilton Precision Metals
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TECHNICAL DATA SHEET

HPM[®] C 276

HPM[®] C 276 is a Nickel-Molybdenum-Chromium-Tungsten alloy with a high level of corrosion resistance. A low carbon content enables the alloy to resist intergranular corrosion at weld joints. These attributes make it an important alloy for the most severe chemical processing applications.

NOMINAL COMPOSITION:

Molybdenum	16.0%	Tungsten	3.6%
Chromium	15.6%	Carbon	.004%
Iron	5.7%	Nickel	Balance

TYPICAL MECHANICAL PROPERTIES:¹

	<u>ANNEALED</u>	<u>COLD ROLLED</u>
Ultimate Tensile Strength	130,000 PSI	240,000 PSI
Yield Strength (.2% Offset)	70,000 PSI	220,000 PSI
Elongation in 2" *	40%	2%
Modulus of Elasticity (Tension)	29.8 X 10 ⁶ PSI	
Poisson's Ratio	0.304	

*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.

HPM C276

PHYSICAL PROPERTIES:²

Density.....	0.321 lbs.cu.in.
Melting Point (Approx.).....	1325° C
Electrical Resistivity @ R.T.....	130 Microhm. cm
Thermal Expansion Coefficient..... (25° to 100° C)	11.2 X 10 ⁻⁶ /°C
Thermal Conductivity @ R.T.....	10.2 W/m. K
Magnetic Attraction.....	None

GENERAL INFORMATION:

The alloy is readily formed from the annealed temper. All standard welding methods except oxy-acetylene can be used for joining.

AVAILABILITY:

HPM C276 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 B575 and UNS N10276.

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