

HPM® C 276



HPM® C 276 (UNS N10276)

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.

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® C 276 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 B575 and UNS N10276.



Technical Data

TYPICAL MECHANICAL PROPERTIES ¹		
	ANNEALED	COLD ROLLED
Ultimate Tensile Strength	130,000 PSI	240,000 PSI
Yield Strength (0.2% 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 0.002" and less.

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

NOMINAL COMPOSITION	
Molybdenum	16.0%
Chromium	15.6%
Iron	5.7%
Tungsten	3.6%
Carbon	0.004%
Nickel	Balance

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

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