Hamilton Precision Metals
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TECHNICAL DATA SHEET

HPM® 80/20 AL

HPM® 80/20 AL is a resistance alloy with a unique composition that provides deep draw capability. It is used as a heating element in electronic applications.

NOMINAL COMPOSITION:

Chromium	19.5%	Iron	.1%
Silicon	.2%	Nickel	Balance

TYPICAL MECHANICAL PROPERTIES:[1]

	ANNEALED	COLD ROLLED
Ultimate Tensile Strength	105,000 PSI	190,000 PSI
Yield Strength (.2% Offset)	50,000 PSI	185,000 PSI
Elongation in 2" *	35%	1%
Grain Size	.010 mm	
Modulus of Elasticity (Tension)	31 X 10^6 PSI	

*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 80/20 AL

PHYSICAL PROPERTIES:[2]

Density…….	0.304 lbs/cu.in.
Melting Point (Approx.)……...	1400°C
Electrical Resistivity @ R.T……	108 Microhm· cm
Temperature Coefficient of Resistivity…… (25° to 100° C)	100 PPM/°C
Thermal Expansion Coefficient…… (20° to 100° C)	13.4 X 10^{-6}/°C
Thermal Conductivity @ 100° C……..	15.0 W/m· K
Magnetic Attraction……..	None

GENERAL INFORMATION:

HPM 80/20 AL has good forming characteristic and can be deep drawn. It is not suitable for extended exposure to air at the elevated temperatures.

AVAILABILITY:

HPM 80/20 AL is available from Hamilton Precision Metals as strip product in thicknesses from .0005" to .050" and width up to 12.0".

Foil Product may be supplied to a thickness of 0001" in width up to 4.0"

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