

## BrushForm® 96 Mill Hardened Tempers

Materion BrushForm® 96 Strip is a high-performance, heat treatable spinodal copper-nickel-tin alloy designed to provide optimal formability and strength characteristics in conductive spring applications such as electronic connectors, switches and sensors. It is available in both pre-heat treated (mill hardened) and heat treatable (age hardenable) forms.

### Chemical Composition (Weight Percent)

Alloy	Nickel	Tin	Copper
BrushForm® 96	8.5 - 9.5	5.5 - 6.5	Balance

### Typical Physical Properties\*

Elastic Modulus	Density	Typical Electrical Conductivity	Thermal Expansion Coefficient	Relative Magnetic Permeability	Poisson's Ratio
18,000 ksi 124 GPa	0.322 lb/in <sup>3</sup> 8.91 g/cm <sup>3</sup>	10% IACS 5.8 MS/m	9.0 in/in °F 16.2 m/m °C	< 1.01	0.3

\*Properties may vary by thickness.

### Typical Mechanical Properties\*

Temper	0.2% Offset Yield Strength ksi (MPa)	Ultimate Tensile Strength ksi (Mpa)	Minimum Elongation (%)**	Hardness (HV)	Minimum 90° Bend Formability R/T Ratio	
					Good Way (Longitudinal)	Bad Way (Transverse)
TM00	55 - 85 (379 - 586)	90 - 110 (621 - 758)	16	180 - 280	0.2	0.2
TM02	70 - 100 (483 - 689)	100 - 120 (689 - 827)	12	200 - 300	0.5	0.5
TM04	85 - 115 (586 - 793)	110 - 130 (758 - 896)	8	230 - 300	1.0	1.0
TM06	90 - 130 (621 - 896)	120 - 140 (827 - 965)	4	240 - 360	2.5	3.0
TM08	100 - 140 (689 - 965)	130 - 160 (896 - 1103)	-	260 - 380	5.0	7.0

\*Properties may vary by shape and thickness.

\*\*Percent elongation valid for strip 0.004" (0.10 mm) and thicker.

## Standard Availability

Mill hardened tempered strip: 0.0015" (0.04 mm) – 0.020" (0.5 mm) gauge

## Industry Standards and Specifications

UNS C72700, ASTM B740

## Related Information

Additional technical information on BrushForm® 96 strip may be obtained by calling +1.800.375.4205. For pricing and availability, call +1.800.521.8800.

## Tolerances

Strip Thickness (inches)		Standard Thickness Tolerance (inches)	Strip Thickness (mm)		Standard Thickness Tolerance (mm)
Over	Including	Plus or Minus	Over	Including	Plus or Minus
	0.0020	0.00010		0.05	0.003
0.0020	0.0040	0.00015	0.05	0.10	0.004
0.0040	0.0060	0.00020	0.10	0.20	0.006
0.0060	0.0090	0.00025	0.20	0.30	0.008
0.0090	0.0130	0.00030	0.30	0.70	0.010
0.0130	0.0260	0.00040	0.70	1.0	0.016
0.0260	0.0370	0.00060	1.0	1.3	0.020
0.0370	0.0500	0.00080	1.3	2.0	0.025
0.0500	0.0750	0.00100			

Additional tolerances are per ASTM B194. Please specify the exact tolerances that you require when you place your order. Tighter tolerances may be available at additional cost. Please contact your local sales engineer to confirm the requested capability.

### Disclaimer:

Only the buyer can determine the appropriateness of any processing practice, end-product or application. Materion does not make any warranty regarding its recommendations, the suitability of Materion's product, or its processing suggestions for buyer's end product, application or equipment.

The properties presented on this data sheet are for reference purposes only, intended only to initiate the material selection process. They do not constitute, nor are they intended to constitute, a material specification. Material will be produced to one of the applicable industry standards, if any, listed in the Industry Standards and Specification section.

Actual properties may vary by thickness and/or part number. Please contact your local sales engineer for detailed properties to be used in simulation.

Any properties marked as preliminary are subject to change at any time as the manufacturing process is further refined.