

## BrushForm® 158 Strip Mill Hardened Tempers

Materion Brush Performance Alloys' BrushForm® 158 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. The higher strength tempers provide excellent fatigue and impact performance making them ideal for voice coil motor springs in optical image stabilization systems. BrushForm 158 strip is available in both pre-heat treated (mill hardened) and heat treatable (age hardenable) forms.

### CHEMICAL COMPOSITION (weight percent)

Alloy	Nickel	Tin	Copper
BrushForm® 158 Strip	14.5 - 15.5	7.5 - 8.5	Balance

### PHYSICAL PROPERTIES\*

Elastic Modulus	Density	Typical Electrical Conductivity	Coefficient of Thermal Expansion	Relative Magnetic Permeability	Poisson's Ratio
18.5 x 10 <sup>6</sup> psi 128 GPa	0.325 lb/in <sup>3</sup> 9.00 g/cm <sup>3</sup>	7% IACS 4 MS/m	9.1 ppm/°F 16.4 ppm/°C	<1.01	0.3

### 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	75-95 (515-655)	95-115 (655-795)	22	190-290	0	0
TM02	90-110 (620-760)	105-125 (725-860)	15	215-315	0	0
TM04	115-130 (790-900)	130 min. (895 min.)	10	245-345	1	1
TM06	130-150 (895-1035)	140 min. (965 min.)	6	270-370	2	2
TM08	140-170 (965-1170)	150-178 (1035-1230)	2	305-405	5	8
TM10	165-195 (1135-1345)	175-210 (1205-1450)	1	370-450	-	-

\* Percent elongation valid only for strip greater than 0.004" (0.10 mm) thick.

### FORMS AVAILABLE

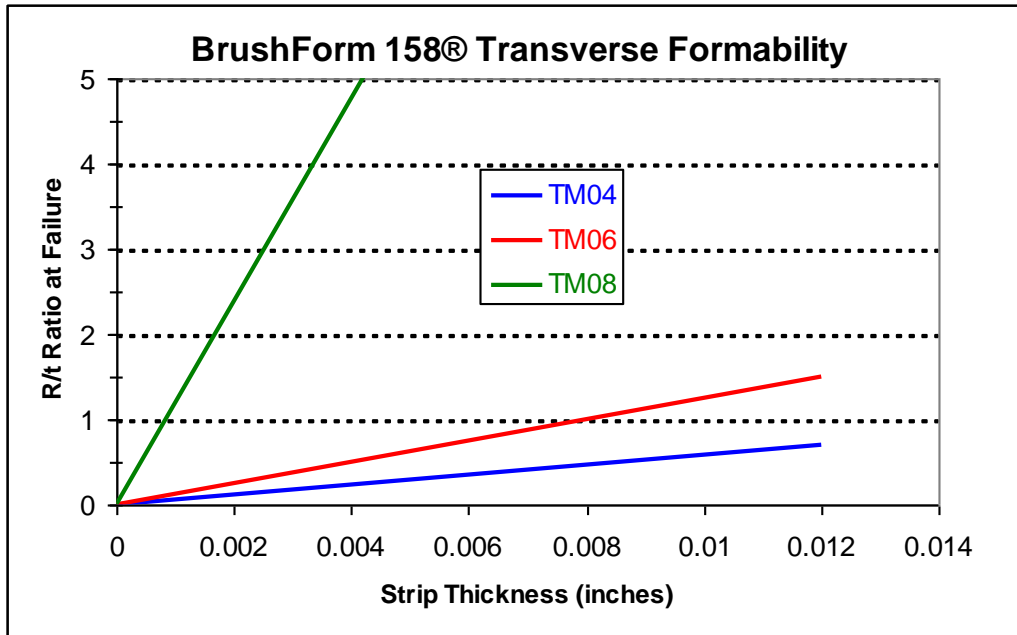
Mill Hardened Tempered Strip: 0.0015" (0.04mm) – 0.020" (0.5mm) gauge.  
For the TM10 & TM12 tempers only, the minimum thickness is 0.0010" (0.0254 mm).

### SPECIFICATIONS AND STANDARDS

UNS C72900, ASTM B740

## RELATED INFORMATION

Additional technical information on BrushForm 158 strip may be obtained by phoning 800-375-4205. For pricing and availability, phone 800-323-2438, or the local sales number listed below.



### North American Service Centers – Sales Inquiries

For strip  $\leq 0.060$ " (1.5 mm) thick. wire and rod  $\leq 0.5$ " (12.7 mm) diameter:

#### Elmhurst, IL

TOLL FREE: 800-323-2438  
PHONE: +(1) 630-832-9650  
FAX: +(1) 630-832-9657

### International Sales Offices

#### CHINA/HONG KONG

TEL: + (852) 2318-1960 / 1907  
[brushalloysHK-info@materion.com](mailto:brushalloysHK-info@materion.com)

#### CHINA/SHANGHAI

TEL: + (86) 21-5237-2328  
[brushalloysCN-info@materion.com](mailto:brushalloysCN-info@materion.com)

#### GERMANY

TEL: + (49) 711-830-930  
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#### JAPAN

TEL: + (81) 33 230 2961  
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#### SINGAPORE/ASEAN

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#### TAIWAN, R.O.C.

TEL: + (886) 2-2747-8800 x-121  
[brushalloysTW-info@materion.com](mailto:brushalloysTW-info@materion.com)

#### UNITED KINGDOM & IRELAND

TEL: + (44) 118-930-3733  
[brushalloysUK-info@materion.com](mailto:brushalloysUK-info@materion.com)

#### Materion Performance Alloys

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#### MATERION CORPORATION

[www.materion.com/alloys](http://www.materion.com/alloys)

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