

BrushForm® 158 Strip - Cold Rolled 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. 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® 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
21.0 x 10 ⁶ psi 144 GPa	0.325 lb/in ³ 9.00 g/cm ³	7% IACS 4 MS/m	9.1 ppm/°F 16.4 ppm/°C	<1.01	0.3

MECHANICAL PROPERTIES*

Cold Rolled Temper Designations for BrushForm® 158 Strip								
Standard Designation	ASTM Designation	Heat Treatment	0.2% YS ksi (MPa)	UTS ksi (MPa)	Minimum Elongation (%)	Hardness (HV)	Minimum 90° Bend Formability R/T Ratio	
							Good Way (Longitudinal)	Bad Way (Transverse)
A	TB00	As Cold Rolled (Before Required Heat Treatment)	25 - 45 (170 - 310)	64 - 85 (440 - 585)	32	100 - 150	0.0	0.0
1/4H	TD01		52 - 75 (360 - 520)	75 - 100 (515 - 690)	18	150 - 235	0.0	0.0
1/2H	TD02		75 - 100 (515 - 690)	85 - 110 (585 - 760)	8	190 - 275	0.0	0.5
H	TD04		95 - 125 (655 - 860)	100 - 130 (690 - 895)	1	220 - 300	0.5	3.0
EH	TD08		115 - 135 (790 - 930)	122 - 145 (840 - 1000)	1	265 - 325	-	-
AT	TX00	After 3 hours @ 700°F (370°C)	100 - 130 (690 - 895)	120 - 150 (825 - 1035)	6	275 - 350	-	-
1/4HT	TS01		115 - 145 (790 - 1000)	130 - 160 (895 - 1105)	4	290 - 365	-	-
1/2HT	TS02		135 - 165 (930 - 1140)	145 - 175 (1000 - 1205)	3	315 - 390	-	-
HT	TS04		155 - 185 (1070 - 1275)	165 - 195 (1140 - 1345)	2	335 - 410	-	-
EHT	TS08		170 - 200 (1170 - 1380)	175 - 205 (1205 - 1415)	1	370 - 450	-	-

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

FORMS AVAILABLE Cold Rolled Temper Strip: 0.0015" (0.04mm) – 0.020" (0.5mm) gauge

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 on the bottom of this page.

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 B 194. 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.

North American Service Centers – Sales Inquiries

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

Elmhurst, IL
TOLL FREE: 800-323-2438
LOCAL: +(1) 630-832-9650
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