

BrushForm® I58 Cold Rolled Tempers

Materion Brush Performance Alloys' BrushForm® I58 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® I58	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 106 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® I58								
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	Cold Rolled	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	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	3 hours @ 650°F (345°C)	170 - 200 (1170 - 1380)	175 - 205 (1205 - 1415)	1	370 - 450	-	-

*Percent elongation valid 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 UNS C72900, ASTM B740

RELATED INFORMATION Additional information on BrushForm® I58 availability, size capability and pricing can be obtained by calling 800-375-4205

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