

## Materion Beryllium Copper Alloy 174 Strip; HT (TH04) Temper (UNS C17410)

Category : Metal , Nonferrous Metal , Beryllium Alloy , Copper Alloy

### Material Notes:

Treatment required for max strength: Mill Hardened Stress Relaxation-% Stress Remaining after 1000 hrs @ 100°C: 95% Stress Relaxation after 1000 hrs @ 200°C: 76% Formability Ratio, 90° Bend, Radius/Thickness (Good Way): 1.2 Formability Ratio (bad Way): 5 Superficial Hardness: 30T 79-30N 48 Tabulated properties apply to products after age hardening. Information supplied by Brush Wellman. Brush Engineered Materials Inc. changed its name to Materion Corporation in March 2011.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Materion-Beryllium-Copper-Alloy-174-Strip-HT-TH04-Temper-UNS-C17410.php](http://www.lookpolymers.com/polymer_Materion-Beryllium-Copper-Alloy-174-Strip-HT-TH04-Temper-UNS-C17410.php)

Physical Properties	Metric	English	Comments
Density	8.80 g/cc	0.318 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	95 - 102	95 - 102	
Hardness, Vickers	210 - 278	210 - 278	
Tensile Strength, Ultimate	750 - 900 MPa	109000 - 131000 psi	
Tensile Strength, Yield	650 - 870 MPa	94300 - 126000 psi	
Elongation at Break	7.0 - 17 %	7.0 - 17 %	
Modulus of Elasticity	138 GPa	20000 ksi	
Fatigue Strength	280 - 310 MPa @# of Cycles 1.00e+8	40600 - 45000 psi @# of Cycles 1.00e+8	Reverse Bending (R=1)

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 Åµm/m-Å°C	10.0 Åµin/in-Å°F	
	@Temperature 20.0 - 200 Å°C	@Temperature 68.0 - 392 Å°F	
Thermal Conductivity	230 W/m-K	1600 BTU-in/hr-ftÅ²-Å°F	
Melting Point	1030 - 1070 Å°C	1890 - 1960 Å°F	
Solidus	1030 Å°C	1890 Å°F	
Liquidus	1070 Å°C	1960 Å°F	

Component Elements Properties	Metric	English	Comments
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Component Elements Properties	Metric	English	Comments
Cobalt, Co	0.35 - 0.60 %	0.35 - 0.60 %	
Copper, Cu	99 %	99 %	as balance

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000290 - 0.00000380 ohm-cm	0.00000290 - 0.00000380 ohm-cm	45-60% IACS Conductivity

## Contact Songhan Plastic Technology Co.,Ltd.

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