

## Materion Beryllium Copper Alloy 3 Strip; AT (TF00) Temper (UNS C17510)

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

### Material Notes:

Treatment required for max strength: 2-3 hrs @ 480°C or Mill Hardened  
 Stress Relaxation-% Stress Remaining after 1000 hrs @ 100°C: 94%  
 Stress Relaxation after 1000 hrs @ 200°C: 72%  
 Formability Ratio, 90° Bend, Radius/Thickness (Good Way): 1  
 Formability Ratio (bad Way): 1  
 Superficial Hardness: 30T 77-82  
 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-3-Strip-AT-TF00-Temper-UNS-C17510.php](http://www.lookpolymers.com/polymer_Materion-Beryllium-Copper-Alloy-3-Strip-AT-TF00-Temper-UNS-C17510.php)

Physical Properties	Metric	English	Comments
Density	8.83 g/cc	0.319 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	92 - 100	92 - 100	
Hardness, Vickers	195 - 275	195 - 275	
Tensile Strength, Ultimate	680 - 900 MPa	98600 - 131000 psi	
Tensile Strength, Yield	550 - 690 MPa	79800 - 100000 psi	
Elongation at Break	10 - 25 %	10 - 25 %	
Modulus of Elasticity	138 GPa	20000 ksi	
Fatigue Strength	260 - 300 MPa @# of Cycles 1.00e+8	37700 - 43500 psi @# of Cycles 1.00e+8	Reverse Bending (R=1)

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 μm/m-°C	10.0 μin/in-°F	
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
Thermal Conductivity	240 W/m-K	1670 BTU-in/hr-ft <sup>2</sup> -°F	
Melting Point	1040 - 1080 °C	1900 - 1980 °F	
Solidus	1040 °C	1900 °F	
Liquidus	1080 °C	1980 °F	

Component Elements Properties	Metric	English	Comments

<b>Component Elements Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Copper, Cu	98 %	98 %	as balance
Nickel, Ni	1.4 - 2.2 %	1.4 - 2.2 %	

<b>Electrical Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
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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