

## Materion Beryllium Copper Alloy 10 Rod and Bar; HT (TH04) Temper; up to 76 mm (UNS C17500)

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

### Material Notes:

Treatment required for max strength: 2 hrs @ 480°C or Mill Hardened 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-10-Rod-and-Bar-HT-TH04-Temper-up-to-76-mm-UNS-C17500.php](http://www.lookpolymers.com/polymer_Materion-Beryllium-Copper-Alloy-10-Rod-and-Bar-HT-TH04-Temper-up-to-76-mm-UNS-C17500.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	95 - 102	95 - 102	
Tensile Strength, Ultimate	750 - 970 MPa	109000 - 141000 psi	
Tensile Strength, Yield	650 - 870 MPa	94300 - 126000 psi	
Elongation at Break	5.0 - 25 %	5.0 - 25 %	
Modulus of Elasticity	138 GPa	20000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$	10.0 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 200 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 392 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	200 W/m-K	1390 BTU-in/hr-ft <sup>2</sup> - $\text{Å}^\circ\text{F}$	
Melting Point	1010 - 1050 $\text{Å}^\circ\text{C}$	1850 - 1920 $\text{Å}^\circ\text{F}$	
Solidus	1010 $\text{Å}^\circ\text{C}$	1850 $\text{Å}^\circ\text{F}$	
Liquidus	1050 $\text{Å}^\circ\text{C}$	1920 $\text{Å}^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Beryllium, Be	0.40 - 0.70 %	0.40 - 0.70 %	
Cobalt, Co	2.4 - 2.7 %	2.4 - 2.7 %	
Copper, Cu	97 %	97 %	as balance

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000290 - 0.00000360 ohm-cm	0.00000290 - 0.00000360 ohm-cm	48-60% IACS Conductivity

## Contact Songhan Plastic Technology Co.,Ltd.

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