

## Materion Beryllium Copper Alloy 25 Rod and Bar; HT (TH04) Temper; over 25.4 to 76 mm (UNS C17200)

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

### Material Notes:

Treatment required for max strength: 2-3 hrs @ 315-330°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-25-Rod-and-Bar-HT-TH04-Temper-over-254-to-76-mm-UNS-C17200.php](http://www.lookpolymers.com/polymer_Materion-Beryllium-Copper-Alloy-25-Rod-and-Bar-HT-TH04-Temper-over-254-to-76-mm-UNS-C17200.php)

Physical Properties	Metric	English	Comments
Density	8.36 g/cc	0.302 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	37 - 44	37 - 44	
Tensile Strength, Ultimate	1200 - 1490 MPa	174000 - 216000 psi	
Tensile Strength, Yield	990 - 1320 MPa	144000 - 191000 psi	
Elongation at Break	4.0 - 9.0 %	4.0 - 9.0 %	
Modulus of Elasticity	131 GPa	19000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 $\mu\text{m/m-}^\circ\text{C}$ @Temperature 20.0 - 200 $^\circ\text{C}$	9.44 $\mu\text{in/in-}^\circ\text{F}$ @Temperature 68.0 - 392 $^\circ\text{F}$	
Thermal Conductivity	105 W/m-K	729 BTU-in/hr-ft <sup>2</sup> - $^\circ\text{F}$	
Melting Point	870 - 980 $^\circ\text{C}$	1600 - 1800 $^\circ\text{F}$	
Solidus	870 $^\circ\text{C}$	1600 $^\circ\text{F}$	
Liquidus	980 $^\circ\text{C}$	1800 $^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Beryllium, Be	1.8 - 2.0 %	1.8 - 2.0 %	
Co + Ni	$\geq 0.20$ %	$\geq 0.20$ %	
Co + Ni + Fe	$\leq 0.60$ %	$\leq 0.60$ %	
Copper, Cu			as balance

Component Elements Properties	98 % Metric	98 % English	Comments
Lead, Pb	<= 0.020 %	<= 0.020 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000610 - 0.00000780 ohm-cm	0.00000610 - 0.00000780 ohm-cm	22-28% IACS Conductivity

## Contact Songhan Plastic Technology Co.,Ltd.

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