

## Materion Beryllium Copper Alloy M25 Rod and Bar; HT (TH04) Temper; over 25.4 to 76 mm (UNS C17300)

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-M25-Rod-and-Bar-HT-TH04-Temper-over-254-to-76-mm-UNS-C17300.php](http://www.lookpolymers.com/polymer_Materion-Beryllium-Copper-Alloy-M25-Rod-and-Bar-HT-TH04-Temper-over-254-to-76-mm-UNS-C17300.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 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$<br>@Temperature 20.0 - 200 $\text{Å}^\circ\text{C}$ | 9.44 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$<br>@Temperature 68.0 - 392 $\text{Å}^\circ\text{F}$ |          |
| Thermal Conductivity | 105 W/m-K  | 729 BTU-in/hr-ft <sup>2</sup> - $\text{Å}^\circ\text{F}$   |          |
| Melting Point        | 870 - 980 $\text{Å}^\circ\text{C}$   | 1600 - 1800 $\text{Å}^\circ\text{F}$   |          |
| Solidus              | 870 $\text{Å}^\circ\text{C}$   | 1600 $\text{Å}^\circ\text{F}$  |          |
| Liquidus             | 980 $\text{Å}^\circ\text{C}$   | 1800 $\text{Å}^\circ\text{F}$  |          |

| 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 | 97.5 %<br>Metric | 97.5 %<br>English | Comments |
|-------------------------------|------------------|-------------------|----------|
| Lead, Pb                      | 0.20 - 0.60 %    | 0.20 - 0.60 %     |          |

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

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China