

Materion Beryllium Copper Alloy 245CT Castings (UNS C82600)

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

Material Notes:

Pouring Temperature: 970-1065°C Heat treatment required for max strength (Annealing): 760-790°C/water quench Heat treatment required for max strength (Hardening): 760-790°C/water quench 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-245CT-Castings-UNS-C82600.php

Physical Properties	Metric	English	Comments
Density	8.22 g/cc	0.297 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	40 - 45	40 - 45	
Tensile Strength, Ultimate	1140 - 1250 MPa	165000 - 181000 psi	Solution Annealed & Aged
Tensile Strength, Yield	1060 - 1170 MPa	154000 - 170000 psi	Solution Annealed & Aged
Elongation at Break	1.0 - 2.0 %	1.0 - 2.0 %	Solution Annealed & Aged
Modulus of Elasticity	131 GPa	19000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 20.0 - 200 $\text{Å}^\circ\text{C}$	10.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 68.0 - 392 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	93.0 W/m-K	645 BTU-in/hr-ft ² - $\text{Å}^\circ\text{F}$	
Melting Point	860 - 955 $\text{Å}^\circ\text{C}$	1580 - 1750 $\text{Å}^\circ\text{F}$	
Solidus	860 $\text{Å}^\circ\text{C}$	1580 $\text{Å}^\circ\text{F}$	
Liquidus	955 $\text{Å}^\circ\text{C}$	1750 $\text{Å}^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Beryllium, Be	2.25 - 2.55 %	2.25 - 2.55 %	
Carbon, C	0.20 - 0.35 %	0.20 - 0.35 %	
Cobalt, Co	0.35 - 0.65 %	0.35 - 0.65 %	
Copper, Cu	97 %	97 %	as balance

Component Elements Properties	Metric 0.12 %	English 0.12 %	Comments
Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000750 - 0.00000960 ohm-cm	0.00000750 - 0.00000960 ohm-cm	18-23% IACS Conductivity

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