

Materion Beryllium Copper Alloy 25 Strip; HT (TH04) Temper (UNS C17200)

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

Material Notes:

Treatment required for max strength: 2 hrs @ 315Â°C Stress Relaxation-% Stress Remaining after 1000 hrs @ 100Â°C: 98% Stress Relaxation after 1000 hrs @ 200Â°C: 74% Superficial Hardness: 30N 58-65 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-Strip-HT-TH04-Temper-UNS-C17200.php

Physical Properties	Metric	English	Comments
Density	8.36 g/cc	0.302 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	38 - 45	38 - 45	
Hardness, Vickers	373 - 446	373 - 446	
Tensile Strength, Ultimate	1310 - 1520 MPa	190000 - 220000 psi	
Tensile Strength, Yield	1130 - 1420 MPa	164000 - 206000 psi	
Elongation at Break	1.0 - 6.0 %	1.0 - 6.0 %	
Modulus of Elasticity	131 GPa	19000 ksi	
Fatigue Strength	310 - 340 MPa @# of Cycles 1.00e+8	45000 - 49300 psi @# of Cycles 1.00e+8	Reverse Bending (R=1)

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 Âµm/m-Â°C @Temperature 20.0 - 200 Â°C	9.44 Âµin/in-Â°F @Temperature 68.0 - 392 Â°F	
Thermal Conductivity	105 W/m-K	729 BTU-in/hr-ftÂ²-Â°F	
Melting Point	870 - 980 Â°C	1600 - 1800 Â°F	
Solidus	870 Â°C	1600 Â°F	
Liquidus	980 Â°C	1800 Â°F	

Component Elements Properties	Metric	English	Comments
Beryllium, Be	1.8 - 2.0 %	1.8 - 2.0 %	

Co + Ni Component Elements Properties	$\geq 0.20\%$ Metric	$\geq 0.20\%$ English	Comments
Co + Ni + Fe	$\leq 0.60\%$	$\leq 0.60\%$	
Copper, Cu	98 %	98 %	as balance
Lead, Pb	$\leq 0.020\%$	$\leq 0.020\%$	

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

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