

Materion Beryllium Copper Alloy 25 Strip; 1/4 H (TD01) Temper (UNS C17200)

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

Material Notes:

Treatment required for max strength: as supplied
 Formability Ratio, 90° Bend, Radius/Thickness (Good Way): 0
 Formability Ratio (bad Way): 0
 Superficial Hardness: 30T 62-75
 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-14-H-TD01-Temper-UNS-C17200.php

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

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	68 - 90	68 - 90	
Hardness, Vickers	121 - 185	121 - 185	
Tensile Strength, Ultimate	510 - 610 MPa	74000 - 88500 psi	
Tensile Strength, Yield	410 - 560 MPa	59500 - 81200 psi	
Elongation at Break	20 - 45 %	20 - 45 %	
Modulus of Elasticity	131 GPa	19000 ksi	
Fatigue Strength	210 - 240 MPa @# of Cycles 1.00e+8	30500 - 34800 psi @# of Cycles 1.00e+8	Reverse Bending (R=1)

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 Åµm/m-Å°C @Temperature 20.0 - 200 Å°C	9.44 Åµin/in-Å°F @Temperature 68.0 - 392 Å°F	
Thermal Conductivity	105 W/m-K	729 BTU-in/hr-ft ² -Å°F	
Melting Point	870 - 980 Å°C	1600 - 1800 Å°F	
Solidus	870 Å°C	1600 Å°F	
Liquidus	980 Å°C	1800 Å°F	

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

Co + Ni Component Elements Properties	≥ 0.20 % Metric	≥ 0.20 % English	Comments
Co + Ni + Fe	≤ 0.60 %	≤ 0.60 %	
Copper, Cu	98 %	98 %	as balance
Lead, Pb	≤ 0.020 %	≤ 0.020 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000910 - 0.0000115 ohm-cm	0.00000910 - 0.0000115 ohm-cm	15-19% IACS Conductivity

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