



CA-174 Beryllium Copper Alloy

Characteristics

- * High Conductivity
- * Superior Strength
- * Good Surface and Shape Throughout Coil
- * Consistent Physical Properties
- * Mill Hardened

Description

Copper Alloy Strip, CDA-17410 Mill Hardened Beryllium Copper offers users the opportunity to upgrade component performance over bronzes and brasses, particularly where conductivity and stress relaxation resistance are design considerations. Alloy 174 is supplied with a yield strength up to 125 ksi., which is superior to copper-nickel-tin alloys. With a conductivity up to 60% it offers superior performance where the paired requirements of high strength and high conductivity are key.

Specifications

ASTM-B-768

Forms Available

COIL Gauge: .001 to .090 Width: .060 to 25.000
 SPOOL Gauge: .005 to .060 Width: .060 to 2.000 Weight: 5 lbs to 4,000 lbs per spool
 SHEET Gauge: .002 to .060 Width: .250 to 24.500 Length: .500 to 144"

Typical Property Values

CHEMICAL

Beryllium: 0.15 - .050%
 Cobalt: 0.35 - 0.60%
 Copper: Balance

PHYSICAL

Density	0.318	lbs per cu. in. @ 68°F (annealed)
Modulus of Elasticity	20.0	x 10 ⁶ PSI Tension
Electrical Conductivity	45 - 60	% IACS @ 68°F (annealed)
Thermal Conductivity	135	BTU per sq. ft. per hr. @ 68°F
Coef. Of Thermal Expansion	9.8	inches/inch/ F x 10x ⁻⁶ from 68°F to 572°F

MECHANICAL

	1/2 HT (TH02)	HT (TH04)	
Tensile Strength	95 - 115	110 - 130	x 1000
Yield (2% offset)	80 - 100	100 - 120	x 1000
Elongation	10 - 20	7 - 17	% in 2 inches
Rockwell Hardness (30T)	B89 - 98	B95 - 102	.020 gauge and above

(Properties listed above are provided for reference only)