



TEMCO ALLOY C80410

TECHNICAL DATA SHEET

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COMMON USES: TEMCO Alloy C80410 was developed for Centrifugal Cast rotor end rings. The combinations of melting practices and high purity melt stock produce an end product that is free of porosity and has excellent electrical properties. Consult our Sales Department to discuss your specific application.

CHEMICAL COMPOSITION

(% max., unless shown as range or min.)

	Cu (incl. Ag)	P	Total Other Elements
Min./Max.	99.9 min.	--	10
Nominal	--	--	--

HEAT TREATMENT

Stress Relieving: 500° F (260° C) for 1h/in of section thickness

Cannot be strengthened by heat treatment

PHYSICAL PROPERTIES

	US Customary	Metric
Melting Range Liquidus	1981° F	1083° C
Solidus	1948° F	1064° C
Density	0.323 lb/in ³ at 68° F	8.94 g/cm ³ at 20° C
Specific Gravity	8.94	8.94
Coefficient of Thermal Expansion	9.4 10 ⁶ per °F (68-392° F)	18.9 10 ⁶ per °C (20-200° C)
Electrical Conductivity	98 % IACS at 68° F minimum	0.568 Siemens/cm at 20° C
Modulus of Elasticity in Tension	17,000 ksi	117,000 MPa

MECHANICAL PROPERTIES

		US Customary	Metric
Tensile Strength	minimum	20 ksi	138 MPa
	typical	25 ksi	172 MPa
Yield Strength	minimum	7 ksi	45 MPa
	typical	8 ksi	55 MPa
Elongation	minimum	20 % in 2 in.	20 % in 51 mm
	typical	25 % in 2 in.	25 % in 51 mm
Rockwell Hardness	typical	30	30

CASTING CHARACTERISTICS

Characteristic	Value
Effect of section size	small
Patternmaker's shrinkage	1/4 in/ft
Drossing	none
Gassing	high
Fluidity	medium
Shrinkage	high
Casting Yield	low

MISCELLANEOUS INFORMATION:

MACHINEABILITY RATING 10
(C36000, Free Cutting Brass = 100)