



# TEMCO ALLOY C70100

## TECHNICAL DATA SHEET

UNCONTROLLED COPY

**COMMON USES:** TEMCO Alloy C70100 was developed as a substitute for the high zinc containing alloys. The alloy was developed for use in applications using electronic beam welding to weld rotor bars to the end rings. The chemistry of the alloy is closely controlled to produce a narrow electrical conductivity range. Consult our Sales department to discuss your specific application.

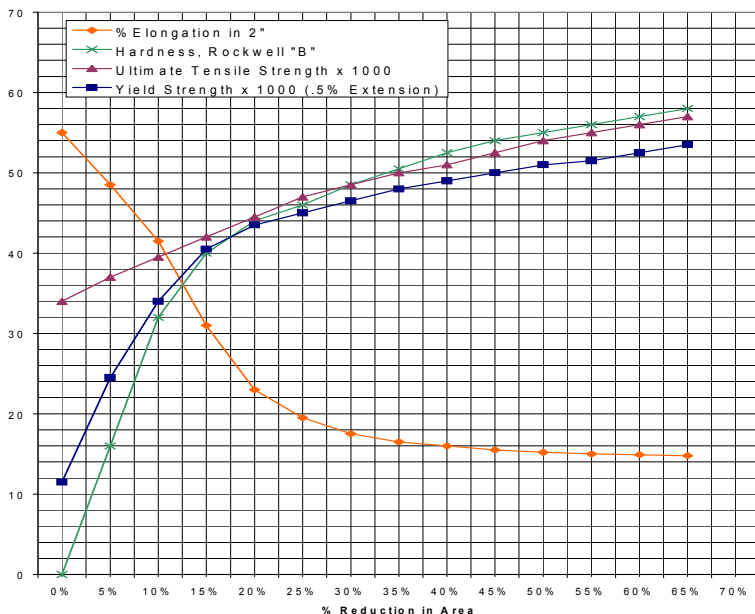
CHEMISTRY		
ELEMENT	NOMINAL %	RANGE %
Copper	96.05	Remainder
Nickel	3.70	3.0 - 4.0
Maganese	.025	.050 max.

TEMPER	TYPICAL PROPERTIES			
	TENSILE STRENGTH ksi (MPa)	YIELD STRENGTH* ksi (MPa)	ELONGATION %	HARDNESS ROCKWELL
Annealed (061)	35 (240)	11 (75)	55	RF 40
Ho1 (10%)	40 (275)	34 (235)	42	RB 32
Ho2 (20%)	45 (310)	44 (300)	23	RB 43
Ho4 (36%)	50 (345)	48 (330)	16	RB 50

\*0.5 % EXTENSION UNDER LOAD

CAPABILITY FOR BEING COLD WORKED	EXCELLENT
CAPABILITY FOR BEING HOT WORKED	EXCELLENT
HOT WORKING TEMPERATURE	1400° - 1700° F (760° - 925° C)
ANNEALING TEMPERATURE	900° - 1300° F (480° - 700° C)

SOFT SOLDERING	EXCELLENT
SILVER ALLOY BRAZING	EXCELLENT
OXYACETYLENE WELDING	FAIR
COATED METAL ARC WELDING	GOOD
RESISTANCE WELDING	GOOD



### MISCELLANEOUS INFORMATION:

MACHINEABILITY RATE\* 30  
\*Free Machining Brass = 100

CONDUCTIVITY 25 % ± 1 % IACS @ 68 °F

DENSITY .323 lb/cu in (8.94 gm/cu cm @ 20° C)

NEAREST APPLICABLE ASTM SPEC: NONE