



# TEMCO ALLOY Si-15

## TECHNICAL DATA SHEET

UNCONTROLLED COPY

**COMMON USES:** Temco Alloy Si-15 is a modification of Alloy C65100 with the chemistry adjusted to produce an alloy with an electrical conductivity range of 14-16 % IACS. It is commonly used for rotor bar applications. Consult our Sales Department to discuss your specific application.

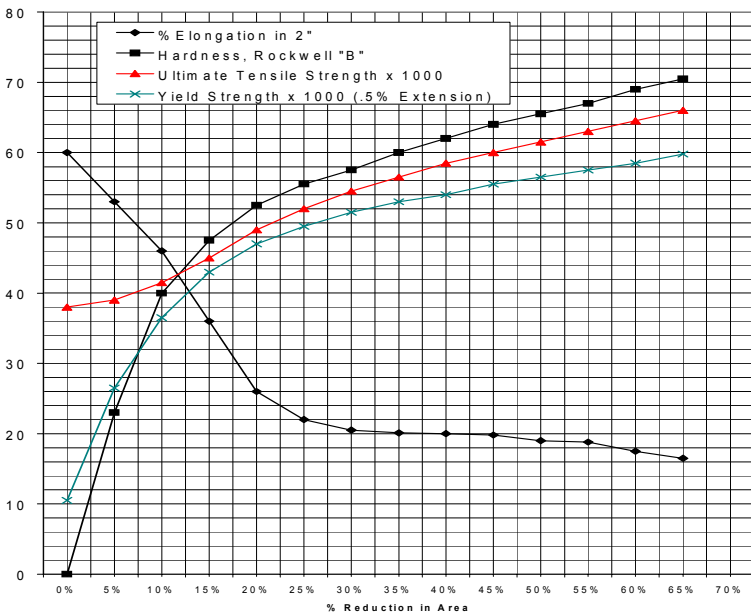
CHEMISTRY		
ELEMENT	NOMINAL %	RANGE %
Copper	98.5	Remainder
Silicon	1.2	.8 – 2.0
Manganese	.3	.7 max.
Lead	--	.05 max.
Iron	--	.8 max.

TEMPER	TYPICAL PROPERTIES			
	TENSILE STRENGTH ksi (MPa)	YIELD STRENGTH* ksi (MPa)	ELONGATION %	HARDNESS ROCKWELL
Annealed (061)	38 (260)	10 (70)	60	RF 50
Ho1 (10%)	42 (290)	36 (250)	55	RB 40
Ho2 (20%)	49 (340)	47 (325)	25	RB 52
Ho4 (36%)	57 (395)	53 (365)	21	RB 60

\*0.5 % EXTENSION UNDER LOAD

CAPABILITY FOR BEING COLD WORKED	EXCELLENT
CAPABILITY FOR BEING HOT WORKED	EXCELLENT
HOT WORKING TEMPERATURE	1300° - 1600° F 705°-870° C
ANNEALING TEMPERATURE	900° - 1250° F 480° - 675° C

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



### MISCELLANEOUS INFORMATION:

MACHINEABILITY RATE\* 30

\*Free Machining Brass = 100

CONDUCTIVITY 15 % ± 1 % IACS @ 68 °F (20° C)

DENSITY .316 lb/cu in (8.75 gm/cu cm @ 20° C)

NEAREST APPLICABLE ASTM SPEC: B98