



TYPICAL USES

- Electrical** Conduit, Pole Line Hardware, Motor, Rotor Bars
- Fasteners** Bolts, Cable Clamps, Cap Screws, Machine Screws, Nuts, Rivets, U Bolts, Fasteners, Screws
- Industrial** Oil Refinery Plumbing Tube, Heat Exchanger Tube, Welding Rod, Hydraulic Pressure Lines
- Marine** Hardware

- Bronze Family:** Low Silicon Bronze B
- Tempers:** H02 Half Hard, H04 Hard, H06 Extra Hard
- Solids:** 3/8" to 2 OD
- Hex:** 3/8" to 2" OD
- Rectangles:** Consult Mill
- Standard Lengths:** 144"

SIMILAR OR EQUIVALENT SPECIFICATION

CDA	ASTM	ASARCON	SAE	AMS	FEDERAL	INGOT	MILITARY	OTHER
C65100	ASTM B98							Low Silicon Bronze B

CHEMICAL COMPOSITION

Alloy	Cu%	Sn%	Pb%	Zn%	Fe%	Ni%	Sb%	P%	S%	Al%	Mn%	Si%
C65100	Remainder		0.05	1.50	0.80	N/A					0.70	0.80 - 2.00

Note: Single values represent maximums.

MACHINABILITY

Alloy	Machinability Rating	Density (lb/cu in.)
C65100	30	0.316

MECHANICAL PROPERTIES

ALLOY: C65100 CONTINUED

Mechanical Properties according to ASTM B98-08

C65100**HO2 HALF HARD TEMPER****SIZE RANGE: UP TO ½" INCLUSIVE ROD**

Tensile Strength, min		Yield Strength, at .5% extension under load min		Elongation in 2 in. or 50 mm min, %	Brinell Hardness, min	Remarks
ksi	MPa	ksi	MPa			
55	380	20	140	11	N/A	

SIZE RANGE: OVER ½" TO 2" INCLUSIVE ROD

Tensile Strength, min		Yield Strength, at .5% extension under load min		Elongation in 2 in. or 50 mm min, %	Brinell Hardness, min	Remarks
ksi	MPa	ksi	MPa			
55	380	20	140	12	N/A	

SIZE RANGE: UP TO ½" INCLUSIVE ROD

Tensile Strength, min		Yield Strength, at .5% extension under load min		Elongation in 2 in. or 50 mm min, %	Brinell Hardness, min	Remarks
ksi	MPa	ksi	MPa			
65	450	35	240	8	N/A	

SIZE RANGE: OVER ½" TO 2" INCLUSIVE ROD

Tensile Strength, min		Yield Strength, at .5% extension under load min		Elongation in 2 in. or 50 mm min, %	Brinell Hardness, min	Remarks
ksi	MPa	ksi	MPa			
65	450	35	240	10	N/A	

HO6 EXTRA HARD TEMPER**SIZE RANGE: UP TO ½" INCLUSIVE ROD**

Tensile Strength, min		Yield Strength, at .5% extension under load min		Elongation in 2 in. or 50 mm min, %	Brinell Hardness, min	Remarks
ksi	MPa	ksi	MPa			
85	585	55	380	6	N/A	

SIZE RANGE: OVER ½" TO 1" INCLUSIVE ROD

Tensile Strength, min		Yield Strength, at .5% extension under load min		Elongation in 2 in. or 50 mm min, %	Brinell Hardness, min	Remarks
ksi	MPa	ksi	MPa			
75	515	45	310	8	N/A	

MECHANICAL PROPERTIES

ALLOY: C65100 CONTINUED

Mechanical Properties according to ASTM B98-08

C65100

HO6 EXTRA HARD TEMPER CONTINUED

SIZE RANGE: OVER 1" TO 1½" INCLUSIVE ROD

Tensile Strength, min		Yield Strength, at .5% extension under load min		Elongation in 2 in. or 50 mm min, %	Brinell Hardness, min	Remarks
ksi	MPa	ksi	MPa			
75	515	40	275	8	N/A	

PHYSICAL PROPERTIES

	US Customary	Metric
Melting Point - Liquidus	1940 F	1060 C
Melting Point - Solidus	1890 F	1032 C
Density	0.316 lb/in ³ at 68 F	8.75 gm/cm ³ @ 20 C
Specific Gravity	8.750	8.75
Electrical Resistivity	86.40 ohms-cmil/ft @ 68 F	14.36 microhm-cm @ 20 C
Electrical Conductivity	120 %IACS @ 68 F	0.07 MegaSiemens/cm @ 20 C
Thermal Conductivity	330 Btu · ft/(hr · ft ² ·oF) at 68F	57.1 W/m · oK at 20 C
Coefficient of Thermal Expansion	9.90 · 10 ⁻⁶ per oF (68-392 F)	17.8 · 10 ⁻⁶ per oC (20-200 C)
Specific Heat Capacity	0.090 Btu/lb/oF at 68 F	377.1 J/Kg · oK at 293 K
Modulus of Elasticity in Tension	17000 ksi	117000 MPa
Modulus of Rigidity	6400 ksi	44130 MPa

Physical Properties provided by CDA

FABRICATION PRACTICES

Joining Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Excellent
Coated Metal Arc Welding	Fair
Spot Weld	Excellent
Seam Weld	Good
Butt Weld	Excellent
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Excellent

Fabrication Properties provided by CDA

THERMAL PROPERTIES

Treatment	Temp./Time - US	Temp./Time - SI
Stress Temperature		
Solution Minimum		
Solution Maximum		
Solution Time		
Solution Medium	None	
Precipitation Value		
Precipitation Time		
Precipitation Medium	None	
Annealing Minimum	900	483
Annealing Maximum	1250	677
Annealing Time		
Hot Works Minimum	1300	705
Hot Works Maximum	1300	705

Thermal Properties provided by CDA