

# C95410

Continuous Cast

<b>Product Description:</b>	Aluminum Bronze
<b>Solids:</b>	½" to 9" O.D.
<b>Tubes:</b>	1⅛" to 9" O.D.
<b>Rectangles:</b>	Up to 15"
<b>Standard Lengths:</b>	144"
<b>Shape/Form:</b>	semi-finished, mill stock or near-net shapes, anode, bar stock, billet/bloom, squares, hex, plate, profile or structural shape, flats/rectangular bar

## Typical Uses

**Industrial** bearings, bushings, gears, pickling baskets, pickling hooks, spur gears, valve components, worms

Note: Also available in heat-treated condition.

## Similar or Equivalent Specification

CDA	ASTM	SAE	AMS	Federal	Military	Other
C95410	B505 B505M					

## Chemical Composition

Cu%	Fe%	Ni% <sup>1</sup>	Al%	Mn%
83.00 min	3.00- 5.00	1.50- 2.50	10.00- 11.50	0.50

Chemical Composition according to ASTM B505/B505M-18

<sup>1</sup>Ni value includes Co.

Note: Cu + Sum of Named Elements, 99.5% min. Unless otherwise noted, single values represent maximums.

## Machinability

Copper Alloy UNS No.	Machinability Rating	Density (lb/in <sup>3</sup> at 68 °F)
C95410	60	0.269



## Mechanical Properties

Tensile Strength, min		Yield Strength, at 0.5% Extension Under Load, min		Elongation, in 2 in. or 50 mm min	Brinell Hardness (3000 kg load)	Remarks
ksi	MPa	ksi	MPa	%	typical BHN	
85	586	32	221	12	170	

Mechanical Properties according to ASTM B505/B505M-18

## Physical Properties

	US Customary	Metric
Melting Point – Liquidus	1900 °F	1038 °C
Melting Point – Solidus	1880 °F	1027 °C
Density	0.269 lb/in <sup>3</sup> at 68 °F	7.45 gm/cm <sup>3</sup> at 20 °C
Specific Gravity	7.45	7.45
Electrical Conductivity	13% IACS at 68 °F	0.075 MegaSiemens/cm at 20 °C
Thermal Conductivity	33.9 Btu/sq ft/ft hr/°F at 68 °F	58.7 W/m at 20 °C
Coefficient of Thermal Expansion 68-572	9 · 10 <sup>-6</sup> per °F (68-572 °F)	15.5 · 10 <sup>-6</sup> per °C (20-300 °C)
Specific Heat Capacity	0.1 Btu/lb/°F at 68 °F	419 J/kg at 20 °C
Modulus of Elasticity in Tension	15500 ksi	107000 MPa

Physical Properties provided by CDA

## Fabrication Properties

Technique	Suitability
Soldering	Good
Brazing	Good
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Good
Coated Metal Arc Welding	Good
Machinability Rating	60

Fabrication Properties provided by CDA

## Thermal Properties

Treatment	Min*	Max*	Value*	Time**	Medium
Stress Relief			600		
Solution Treatment	1600	1675		1	Water
Annealing	1150	1225		1	

Thermal Properties provided by CDA

\*Temperature is measured in Fahrenheit. \*\*For Stress Relief, Solution Treatment and Annealing - Time is measured in hours/inch of thickness. For Precipitation Heat Treatment - Time is measured in hours.