C95410

Continuous cast	
Product description	Aluminum bronze
Solids	1/2" to 9" O.D.
Tubes	1 1/8" to 9" O.D.
Rectangles	Up to 15"
Standard lengths	144"
Shape/form	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.

Similiar or equivalent specification

CDA	ASTM	SAE	AMS	Federal	Military	Other
C95410	B505 B505M					

Chemical composition

Cu (%)	Fe (%)	Ni (%)[1]	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-23

[1]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^3 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-23

Physical properties

	US customary	Metric
Melting point – liquidus	1900 °F	1038 °C
Melting point – solidus	1880 °F	1027 °C
Density	0.269 lb/in³ at 68 °F	7.45 gm/cm³ 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^{-6} per °F (68-572 °F)	15.5 · 10^{-6} per °C (20-300 °C)
Specific heat capacity	0.1 Btu/lb/ °F at 68 °F	419 J/kg at 20 °C
Modulas 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