

## INTRODUCING



**ECO BRONZE**  
HIGH PERFORMANCE LEAD FREE BRONZE

THE COST COMPETITIVE  
LEAD-FREE ALTERNATIVE  
TO C93200 (SAE660)

ECO BRONZE has been independently tested and proven to be a great lead-free alternative to the standard C93200 leaded bronze alloy, and in some applications, it offers superior performance. Best of all, it is an environmentally-friendly, lead-free bronze alloy.

ECO BRONZE was put through a variety of arduous tests by independent laboratories to verify its performance and suitability as a quality bearing material.

### LEAD-FREE BRONZE ENGINEERED FOR PERFORMANCE

**ECO BRONZE provides the following advantages when compared to traditional wear alloys:**

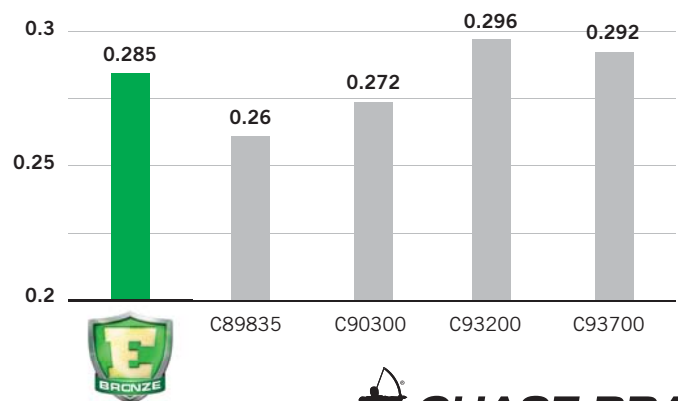
- Lead-Free, Arsenic-Free, Bismuth-Free
- Equivalent Coefficient of Friction
- Non-Galling
- Superior Wear
- Does not get Brittle at High Temperatures
- Superior Impact and Compressive Strength
- Excellent Machinability
- Excellent Dezincification\*
- Weight Savings
- Recyclable

**Available in solids or hollows in the following size ranges:**

<b>Extruded Round Solids:</b>	<b>0.375" to 2.50"</b> (Sold as C69300)
<b>Cast Round Solids:</b>	<b>0.500" to 12.00"</b>
<b>Cast Round Hollow:</b>	<b>0.500" to 21.00"</b>
<b>Cast Rectangle:</b>	<b>0.375" to 12.00"</b>



**ASTM G115 Static Coefficient of Friction**  
Contact Surface: AISI 4140 Steel – Rc 28



\*Dezincification : Testing of ECO BRONZE was also performed by an independent laboratory to the ISO-6509 testing protocol, and shows ZERO dezincification



## CHEMISTRY SPECIFICATION (ASTM B30)

Cu (%)	Si (%)	P (%)	Pb (%)	Fe (%)	Sn (%)	Ni (%)	Mn (%)	Sb (%)
75-78	2.7-3.4	0.05-0.20	0.09 max	0.10 max	0.30 max	0.20 max	0.10 max	0.10 max

## MECHANICAL PROPERTIES

### ECO BRONZE C87850:

Tensile Strength (min) KSI	65
Yield Strength (min) KSI	25
Elongation (min) %	8
Brinell Hardness (500 lb load)	103

## PHYSICAL PROPERTIES

Melting Point - Liquidus (°F)	1616
Melting Point - Solidus (°F)	1571
Density (lb/cu in.)	0.300
Electrical Conductivity (%IACS at 68°F)	8
Thermal Conductivity (Btu/sq ft/ft hr/°F at 68°F)	21.8
Coefficient of Thermal Expansion (x10-6/°F, 68-212°F)	10.3
Coefficient of Thermal Expansion (x10-6/°F, 68-392°F)	10.3
Coefficient of Thermal Expansion (x10-6/°F, 68-572°F)	10.4
Specific Heat Capacity (Btu/lb/°F at 68°F)	0.09

## FABRICATION PROPERTIES

Joining Technique	Rating
Brazing	Excellent
Butt Welding	Good
Seam Welding	Good
Soldering	Excellent
Spot Welding	Good

## THERMAL TREATMENTS

Treatment	Minimum	Maximum
Stress Relief	Not Required	
Annealing	930°F	1112°F
Hot Working	1200°F	1400°F

## MACHINABILITY

Process	Rating
CNC	100%
Multispindle	85%



To learn more or obtain a list of ECO BRONZE Bearing manufacturers

visit [www.ECOBRONZE-USA.COM](http://www.ECOBRONZE-USA.COM)

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# CHASE BRASS

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