

START SMALL. MELT QUICKLY. MAXIMIZE PRODUCTIVITY.

Introducing

# EZ-MELT granular ingots



The smallest, yet most versatile, member of our product line



**Made with ECO BRONZE®**  
HIGH PERFORMANCE SILICON BRONZE

C87850 - ECO BRONZE is AWWA C800 approved for use in cast underground service lines. Additionally, ECO BRONZE is suitable for use in AWWA C700 and C500 Standard applications. ECO BRONZE has been recognized in a university study as the leading lead-free alloy for environmental friendliness, efficient manufacturing of component parts, and end-of-life recyclability. To support sustainability efforts, ECO BRONZE EZ-MELT uses less energy to melt versus other lead free alloys and is fully recyclable, as all elements of the alloy can be separated and recaptured to support end of life.

**AWWA C800 STANDARD** - Underground service valves and fittings

**AWWA C700 STANDARD** - Cold-water displacement meters

**AWWA C500 STANDARD** - Metal-seated gate valves for water supply service

ECO BRONZE® characteristics:

- Lead free\*
- Dezincification resistant
- Stress corrosion cracking resistant
- High fluidity
- Melts at lower temperature
- Low pouring temperature
- Short solidification range
- Less prone to dispersed microporosity
- Low dross
- High strength
- Lighter weight
- Energy efficient production
- Good machinability
- Fully recyclable
- Reduces CO<sub>2</sub>
- Supports sustainability efforts

EZ-MELT granular ingots provide more surface area in a furnace that results in more efficient melting and reduced BTU consumption than traditional ingots.

**START SMALL.  
MELT QUICKLY.  
MAXIMIZE PRODUCTIVITY.**

- Fully recyclable
- Dezincification resistant
- Stress corrosion cracking resistant
- Good machinability
- Low pouring temperature
- High fluidity
- Short solidification range
- Energy efficient production

# Silicon bronze alloy properties

## Copper silicon bronze alloy properties

	C87500	C87600	C87850
Melting point - liquidus (°F)	1680	1780	1616
Melting point - solidus (°F)	1510	1580	1571
Density (lb/cu in.)	0.29	0.3	0.3
Electrical conductivity (%IACS at 68°F)	6.7	6.0	8
Thermal conductivity (Btu/sq ft/hr/°F at 68°F)	16.0	16.4	21.8
Coefficient of thermal expansion (10 <sup>-6</sup> /°F, 68-212°F)			10.3
Coefficient of thermal expansion (10 <sup>-6</sup> /°F, 68-392°F)			10.3
Coefficient of thermal expansion (10 <sup>-6</sup> /°F, 68-572°F)	10.9		10.4
Specific heat capacity (Btu/lb/°F at 68°F)	0.09	0.09	0.09
Annealing temperature range (°F)			1000-1200
Hot working temperature range (°F)			1200-1400



## Minimum mechanical properties

	ASTM standard	Casting method (ksi)	Tensile strength (ksi)	Yield strength	Elong. % 500 lb load	Brinell hardness
C87500	B271	Centrifugal cast	60	24	16	-
	B584	Sand	60	24	16	-
	B806	Permanent mold	80	30	15	-
C87600	B271	Centrifugal cast	60	30	16	-
	B584	Sand	60	30	16	-
e C87850	B505	Continuous cast	65	25	8	103 (500 kg)
	B584	Sand	59	22	16	
	B806	Permanent mold	64	32	16	



## Chemistry specification (ASTM B30)

	Cu (%)	Si (%)	P (%)	Pb (%)	Fe (%)	Sn (%)	Ni (%)	Mn (%)	Sb (%)	Zn	Al
C87500	79.0	3.0-5.0	-	0.09 max	0.20 max	-	-	0.25 max	-	12.0-16.0	0.50 max
C87600	88.0	3.5-5.5	-	0.09 max	0.20 max	-	-	0.25 max	-	4.0-7.0	-
e C87850	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	Remainder	

Wieland Chase | 14212 Selwyn Drive | Montpelier, OH 43543  
 P 800-537-4291 | [ecobronze@wieland.com](mailto:ecobronze@wieland.com) | [wieland-chase.com](http://wieland-chase.com)

To learn more about EZ MELT visit  
[www.wieland-chase.com/ez-melt](http://www.wieland-chase.com/ez-melt)



© Wieland Chase, 2024  
 ECO BRONZE® is a registered trademark of WIELAND CHASE. Used with permission.

The values listed on this page represent reasonable approximations suitable for general engineering use. Due to commercial variations in compositions and to manufacturing limitations, they should not be used for specification purposes. See applicable ASTM International specification references.

