

RIVERSIDE BRASS

& ALUMINUM FOUNDRY LIMITED

C87300 (Silicon Bronze)

Last Updated: Jan 27, 2006

Chemical Composition
(% max., unless shown as range or min.)

	Cu	Fe	Pb	Mn	Si	Zn
Min./Max.	94.0 min	.20	.20	.8-1.5	3.5-4.5	.25
Nominal	-	-	-	1.1	4.0	-

Note: Cu + Sum of Named Elements, 99.5% min.

Applicable Specifications

Product	Specification
Centrifugal	ASTM B271 SAE J462, J461
Ingot	ASTM B30
Precision	MILITARY MIL-C-11866
Sand	ASTM B763, B584 SAE J461, J462

Common Fabrication Processes

Casting

Fabrication Properties

Joining Technique	Suitability
Machinability Rating	40

Mechanical Properties (measured at room temperature, 68 F (20 C))

Temper	Section Size	Cold Work	Typ/Min	Temp	Tensile Strength	Yield Strength (0.5% ext. under load)	Yield Strength (0.2% offset)	Yield Strength (0.05% offset)	El	Rockwell Hardness			Vickens Hard.	Brinell Hard.	Shear Strength	Fatigue Strength*	Izod Impact Strength	
										%	B	C/F/30T						
	in.	%		F	ksi	ksi	ksi	ksi	%	B	C	F/30T	500	500	3000	ksi	ksi	ft-lb
	mm.			C	MPa	MPa	MPa	MPa								MPa	MPa	J
As Sand Cast																		
M01	0.0	0	TYP	68	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
	0.0			20	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0
As Centrifugal Cast																		
M02	0.0	0	SMIN	68	45	18	-	-	20	-	-	-	-	-	-	-	-	0.0
	0.0			20	310	124	-	-	20	-	-	-	-	-	-	-	-	0.0
As Sand Cast																		
M01	0.0	0	SMIN	68	45	18	-	-	20	-	-	-	-	-	-	-	-	0.0
	0.0			20	310	124	-	-	20	-	-	-	-	-	-	-	-	0.0

*Fatigue Strength: 100 x 10⁶ cycles, unless indicated as [N]X 10⁶.

Physical Properties

<>	US Customary	Metric
Melting Point - Liquidus	1780 F	971 C
Melting Point - Solidus	1510 F	821 C
Density	0.302 lb/in ³ at 68 F	8.36 gm/cm ³ @ 20 C
Specific Gravity	8.36	8.36
Electrical Conductivity	6 % IACS @ 68 F	0.035 MegaSiemens/cm @ 20 C
Thermal Conductivity	16.4 Btu · ft/(hr · ft ² ·oF) at 68 F	28.4 W/m · oK at 20 C
Coefficient of Thermal Expansion	11.0 · 10 ⁻⁶ per oF (68-572 F)	16.8 · 10 ⁻⁶ per oC (20-300 C)
Modulus of Elasticity in Tension	16000 ksi	110000 MPa

Typical Uses No information available.

The above data used by permission from the **Copper Development Association Inc.** A complete Description of all UNS Copper Alloys is available at www.copper.org