

RIVERSIDE BRASS & ALUMINUM FOUNDRY LIMITED

C95600

Last Updated: Jan 27, 2006

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

	Cu	Al	Ni(1)	Si
Min./Max.	88.0 min	6.0-8.0	.25	1.8-3.2
Nominal	90.3	7.0	-	2.5

(1) Ni value includes Co.

Note: Cu + Sum of Named Elements, 99.0% min.

Applicable Specifications

Product	Specification
Ingot	ASTM B30
Sand	ASTM B763, B148

Common Fabrication Processes

Casting

Fabrication Properties

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

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	F30T						
	in.	%		F	ksi	ksi	ksi	ksi	%				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	75	34	-	-	18	-	-	-	-	140	-	-	-	0.0
	0.0			20	517	234	-	-	18	-	-	-	-	140	-	-	-	0.0
M01	0.0	0	SMIN	68	60	28	-	-	10	-	-	-	-	-	-	-	-	0.0
	0.0			20	415	195	-	-	10	-	-	-	-	-	-	-	-	0.0

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

Physical Properties

<>	US Customary	Metric
Melting Point - Liquidus	1840 F	1004 C
Melting Point - Solidus	1800 F	982 C
Density	0.278 lb/in ³ at 68 F	7.7 gm/cm ³ @ 20 C
Specific Gravity	7.7	7.7
Electrical Resistivity	122.8 ohms-cmil/ft @ 68 F	20.41 microhm-cm @ 20 C
Electrical Conductivity	8 % IACS @ 68 F	0.049 MegaSiemens/cm @ 20 C
Thermal Conductivity	22.3 Btu · ft/(hr · ft ² ·oF) at 68 F	38.6 W/m · oK at 20 C
Coefficient of Thermal Expansion	9.2 · 10 ⁻⁶ per oF (68-572 F)	16.6 · 10 ⁻⁶ per oC (20-300 C)
Specific Heat Capacity	0.1 Btu/lb·oF at 68 F	419.0 J/kg · oK at 293 K
Modulus of Elasticity in Tension	15000 ksi	103400 MPa

Temperatures Most Commonly Used No information available.

Typical Uses

Electrical

Terminals, Cable Connectors

Industrial

Worms, Gears, Valve Stems

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