



# Rheocast™ Company

Brass and Aluminum Die Casting Specialists

## C99750 BRASS ALLOY PROPERTIES

Chemical Properties										
Elements	Cu	Al	Fe	Pb	Mn	Ni	Zn	Si	Sn	
%Min.	55.00	0.25	-	0.50	17.00		17.00	-	-	
%Max.	61.00	3.00	1.00	2.50	23.00	5.00	23.00	0.50	0.50	
%Nominal	58.00	1.60	-	1.50	20.00	-	20.00	-	-	

Note: Cu + Sum of Named Elements: 99.7% Min.

### Applicable Specifications

Die Cast	ASTM B176
Ingot	ASTM B30

### Fabrication Properties

Joining Technique	Suitability
Soldering	Good
Brazing	Good
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Not Recommended
Machinability Rating	80

### Physical Properties

Specific Gravity	8.03
Density	0.29 lb/in <sup>3</sup> at 68°F
Melting Point - Solidus	1,505°F
Melting Point - Liquidus	1,550°F
Electrical Resistivity	501.3 ohms/cmil/ft at 68°F
Electrical Conductivity	2% IACS at 68°F
Coefficient of Thermal Expansion	13.5 x 10 <sup>-6</sup> per °F (68°F - 572°F)
Specific Heat Capacity	0.09 Btu/lb/°F at 68°F
Modulus of Elasticity in Tension	17,000 ksi

### Mechanical Properties

As Cast	Temper	Temp	Tensile Strength	Yield Strength (0.2% offset)	El %	Rockwell Hardness B	Fatigue Strength
			MPa	MPa			MPa
S-Max	M01	68	-	-	-	-	-
S-Max	M01	20	-	-	-	-	-
S-Min	M01	68	-	-	-	-	-
S-Min	M01	20	-	-	-	-	-
Typical	M01	68	65	32	30	77	19
Typical	M01	20	448	221	30	77	128

\* Fatigue Strength: 100 x 10<sup>6</sup> cycles

### Typical Uses

Industrial
Corrosion Resistant Components, Enclosures

**Temper Most Commonly Used:** No information available

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Sources: ASTM, SAE, Copper Development Association

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