



# Rheocast™ Company

Brass and Aluminum Die Casting Specialists

## C87500 BRASS ALLOY PROPERTIES

### Chemical Properties

Elements	Cu	Al	Pb	Si	Zn
%Min.	79.00	-	-	3.00	12.00
%Max.	-	0.50	0.50	5.00	16.00
%Nominal	82.00	-	-	4.00	14.00

Note: Cu + Sum of Named Elements: 99.5% Min.

### Applicable Specifications

Ingots	ASTM B30
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### Fabrication Properties

Joining Technique	Suitability
Soldering	Not Recommended
Brazing	Fair
Oxyacetylene Welding	Fair
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Not Recommended
Machinability Rating	50

### Physical Properties

Specific Gravity	8.28
Density	0.299 lb/in <sup>3</sup> at 68°F
Melting Point - Solidus	1,510°F
Melting Point - Liquidus	1,680°F
Electrical Resistivity	154.2 ohms/cmil/ft at 68°F
Electrical Conductivity	6% IACS at 68°F
Thermal Conductivity	16.0 Btu/ft/(hr/ft <sup>2</sup> /°F) at 68°F
Coefficient of Thermal Expansion	10.9 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	15,400 ksi

### Mechanical Properties

As Cast	Temper	Temp	Tensile Strength	Yield Strength (0.5% ext. under load)	EI %	Brinell Hardness 500/3000	Fatigue Strength*
		°F °C	ksi MPa	ksi MPa			ksi MPa
Sand Cast							
S-Max	M01	68	-	-	-	-	-
S-Max		20	-	-	-	-	-
S-Min	M01	68	60	24	16	-	-
S-Min		20	414	165	16	-	-
Typical	M01	68	67	30	21	115/134	22
Typical		20	462	207	21	115/134	152

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

### Typical Uses

Builders Hardware	Window Hardware
Fasteners	Clamps, Hexagonal Nuts
Marine	Small Boat Propellers, Boat Parts
Industrial	Impellers, Pump Fixtures, Levers, Valve Bodies, Bearings, Gears, Fittings High-Strength, Thin Walled Die Castings
Plumbing	Fixtures, Fittings, Flanges, Hexagonal Nuts

Tempers Most Commonly Used: No information available

Division of the Fall River Group, Inc.

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Sources: ASTM, SAE, Copper Development Association

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