



Rheocast™ Company

Brass and Aluminum Die Casting Specialists

C85800 BRASS ALLOY PROPERTIES

Chemical Properties

Elements	Cu ⁽¹⁾	Al	Sb	As	Fe	Pb	Mn	Ni ⁽²⁾	P	Si	S	Sn	Zn
%Min.	57.00	-	-	-	-	-	-	-	-	-	-	-	31.00
%Max.	-	0.55	0.05	0.05	0.50	1.50	0.25	0.50	0.01	0.25	0.05	1.50	41.00
%Nominal	61.50	-	-	-	-	1.00	-	-	-	-	-	1.00	36.00

⁽¹⁾ In determining Cu Min: Cu may be calculated as Cu + Ni

⁽²⁾ Ni value includes Co

Note: Cu + Sum of Named Elements: 98.7% Min.

Applicable Specifications

Die Cast	ASTM B176
Products	SAE J461, J462
Ingot	ASTM B30

Fabrication Properties

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

Mechanical Properties

As Cast	Temper	Temp	Tensile Strength	Yield Strength (0.2% offset)	EI %	Rockwell Hardness B
		°C	MPa	MPa		
S-Max	M04	68	-	-	-	60
S-Max		20	-	-	-	60
S-Min	M04	68	-	-	-	55
S-Min		20	-	-	-	55
Typical	M04	68	55	30	15	-
Typical		20	379	207	15	-

Physical Properties

Specific Gravity	8.44
Density	0.305 lb/in ³ at 68°F
Melting Point - Solidus	1,600°F
Melting Point - Liquidus	1,650°F
Electrical Resistivity	51.9 ohms/cmil/ft at 68°F
Electrical Conductivity	20% IACS at 68°F
Thermal Conductivity	48.5 Btu/ft/(hr/ft ² /°F) at 68°F
Specific Heat Capacity	0.09 Btu/lb/°F at 68°F
Modulus of Elasticity in Tension	15,000 ksi
Magnetic Permeability	1.0

Typical Uses

Builders Hardware	Window Hardware, Door Hardware, Ornamental Hardware
Marine	Ship Trim, Marine Hardware
Industrial	Brush Holders, Meter Covers, Enclosures Levers, Valve Parts, Corrosion Resistant Components High-Strength, Thin Walled Die Castings
Plumbing	Fittings, Flanges, Hexagonal Nuts

Tempers Most Commonly Used: No information available

Division of the Fall River Group, Inc.

N114 W19250 Clinton Drive / Germantown, WI 53022

Ph: (262) 251-4942 / Fax: (262) 251-0544

www.rheocast.com

ISO 9001 Registered

Sources: ASTM, SAE, Copper Development Association

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