



# Metal Alloys Corporation



## MANGANESE BRONZE "SAE 430 A"

### EQUIVALENT SPECIFICATIONS

#### SPECIFICATIONS

UNS  
ISO  
JIS

#### DESIGNATION

C86200  
CuZn26Al4Fe3Mn3  
CAC303

Manganese bronze – copper casting alloy UNS C86200 consists primarily of copper, zinc, aluminum and manganese bronze. Manganese existing in UNS C86200 provides an attractive chocolate brown color which is commonly used in architecture. The presence of lead in the alloy improves the longevity of the alloy.

#### Typical Uses:

**BUILDERS:** Hardware Brackets, Structural Parts **FASTENERS:** Screw Down Nuts **INDUSTRIAL:** Struts, Gears, Valve Stems, Bushings, Cams, Wear Rings for Pressing Dies for Wood Pulp Industry, High Strength Machine Parts, Hooks, Frames, Shafts, Marine Racing Propellers, Worm Gears, Pressing Dies for Wood Pulp **MARINE:** Rudders, Marine Castings, Boat Parts, Clamps

#### CHEMICAL COMPOSITION

	Zn	Cu	Fe	Mn	Ni	Pb	Sn
Min/Max	22-28	60-66	2-4	2.5-5	1.0max	0.2max	0.2 max
Nominals	25	63	3	3.7	-	-	-

#### PHYSICAL PROPERTIES

	Us Customary
Melting Point - Liquidus	1725 F
Melting Point - Solidus	1650 F
Density	0.288 Lb/in <sup>3</sup> At 68 F
Specific Gravity	7.970
Electrical Resistivity	136.70 Ohms-cmil/ft @ 68 F
Electrical Conductivity	8 %iacs @ 68 F
Thermal Conductivity	20.50 Btu • Ft/(hr • Ft <sup>2</sup> • °f)at 68f
Coefficient Of Thermal Expansion	120 • 10 <sup>-6</sup> Per Of (68-392 F)
Specific Heat Capacity	0.090 Btu/lb/°f At 68 F
Modulus Of Elasticity In Tension	15000 Ksi
Magnetic Permeability*	1.240

#### SIZES AVAILABLE :

ROUND RODS	8mm To 100 mm
HEX	10mm To 60mm
SQUARE	10mm To 60mm
FLAT	10mm Min Thickness and max Width 120mm
BILLETS	Up to 200 mm
INGOTS	As per Specification

Regd. Office & Plant  
Plot No. 6 & 7, Village: Lakhavaval, Post: Khodiyar Colony, Jamnagar - 361006.  
Tel.: +91-288-2889251 / 52, Fax: +91-288-2889223, Cell: +91-9924443396  
Email: info@metalalloyscorp.com • web: www.metalalloyscorp.com



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(A Govt. of India Undertaking)