NWB®

High Performance Bearing Technology

C86300 MANGANESE BRONZE (SAE 430-B)



Cast Manganese Bronze, has outstanding mechanical properties to withstand the most rigorous industrial requirements. Its high strength and corrosion resistance make it ideal for heavy-duty construction.

Alternative Specifications

Continuous
ASTM B-505
Centrifugal
AMS 4862
ASTM B-271
SAE J461
SAE J462

Physical Properties

Melting Point - Liquidus	1693 F
Melting Point - Solidus	1625 F
Density	0.283 lb/in^3 at 68 F
Specific Gravity	7.83
Electrical Resistivity	130.8 ohms-cmil/ft at 68 F
Electrical Conductivity	8 %IACS at 68 F
Thermal Conductivity	20.5 Btu · ft/(hr · ft2·°F) at 68F
Coefficient of Thermal Expansion	12.0 ·10^{-6} per °F (68-572 F)
Specific Heat Capacity	0.09 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension	14200 ksi
Machinability Rating	8%

Room Temp Tensile & Hardness Data

CASTING	TEMPER	TENSILE (KSI) MIN	YIELD (KSI) MIN	ELONGATION IN HD MIN	BRINELL (3000 KG)
CONTINUOUS	AS CAST	110	60	14	225

Typical Uses

Oil & Gas
Bearings, Wear Bushings, Pump Impellers, Lineage Bushings, Valve Guides & Seats, Worm Gears

Aerospace
Heavy Load Bearings & Bushings, Screw Down Nuts, Hydraulic Cylindrical Parts

Automotive
Cams, Transmission Parts, Connector Rods

Builders Hardware
Brackets

Electrical
Electrical Components, Switches

Fasteners
Screw Down Nuts

Other Industrial
Hydraulic Cylinder Parts, Large Valve Stems, Bushings, Hooks, Cams, Gib, Gears, Slow Speed Heavy Load Bearings, Wear Rings, Forming Dies for Wood Pulp Industry, Struts, High Strength Machine Parts, Frames, Propellers, Bridge Pins, Hold Down Nuts for the Machine Tool Industry, Heavy Duty Off-Highway Vehicles

Marine
Marine Hardware, Boat Parts, Covers for Marine Hardware, Rudders, Clamps, Prop Shaft Nuts

Chemical Composition

	Cu(1)	Al	Fe	Pb	Mn	Ni(2)	Sn	Zn
min/max	60.0-66.0	5.0-7.5	2.0-4.0	.20	2.5-5.0	1.0	.20	22.0-28.0
nominal	63.0	6.2	3.0	-	3.7	-	-	25.0

(1) In determining Cu min, Cu may be calculated as Cu + Ni.
(2) Ni value includes Co.
NOTE: Cu +(sum of named elements) = 99.0% min.

NWB®
National Distribution Centre
James Road
Adwick-Le-Street
Doncaster, South Yorkshire,
DN6 7HH
T: +44 1302 33066 F: +44 1302 330377