NWB®

High Performance Bearing Technology

C46400 NAVAL BRASS



C46400, Naval Brass is a high strength and corrosion resistant alloy. It is widely used in marine construction where a strong, corrosive resistant, and hard material is required. The addition of tin gives the alloy an inherent resistance to dezincification, thereby further inhibiting the impingement by seawater at higher than normal temperatures.

Alternative Specifications

ASTM B-21, B-249, B-171
AMS 4611, 4612

Physical Properties

Melting Point - Liquidus	1650 F
Melting Point - Solidus	1630 F
Density	0.304 lb/in^3 at 68 F
Specific Gravity	8.41
Electrical Resistivity	39.9 ohms-cmil/ft at 68 F
Electrical Conductivity	26 %IACS at 68 F
Thermal Conductivity	67.0 Btu · ft/(hr · ft2·°F) at 68F
Coefficient of Thermal Expansion	11.8 ·10^{-6} per °F (68-572 F)
Modulus of Elasticity in Tension	15000 ksi
Modulus of Rigidity	5600 ksi
Machinability Rating	30%

Room Temp Tensile & Hardness Data

FORM	TEMPER	SECTION SIZE (INCHES)	TENSILE STRENGTH (KSI)	YIELD STRENGTH (.05% ext. under load) (KSI)
ROD	H02	1/4” diameter	80	57
ROD	H02	1” diameter	75	53
PLATE	M20 / O25	3” thick	50	20

Typical Uses

Hardware
Lock Pins

Electrical
Precision Shipboard Equipment

Fasteners
Bolts, Nuts, Rivets, Landing Gear Bushings

Other Industrial
Bearings, Bushings, Pressure Vessels, Dies, Aircraft Turn buckle Barrels, Valve Stems, Condenser Plates, Hub Cones, Welding Rod, Structural Uses, Heat Exchanger Plates, Valve Guides, Valve Seats, Forgings

Marine
Decorative Fittings, Turn buckles, Shafting, Marine Hardware

Ordnance
Missile Components

Other
Baffle Plates

Chemical Composition

	Cu	Fe	Pb	Sn(1)	Zn
min/max	59.0-62.0	.10	.20	.50-1.0	Rem.
nominal	60.0	-	-	-	39.2

(1) For tubular products, the minimum Sn content may be .9%.
NOTE: Cu + (sum of named elements) = 99.6% min

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