

NAVAL BRASS

UNS C46400



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UNS C46400 Naval Brass is a widely used alloy in marine and industrial applications due to its excellent corrosion resistance, good strength and machinability. It is specifically formulated to withstand harsh marine environments. Its composition and properties ensure durability and reliability in seawater and other corrosive environments, making it a preferred choice for critical components in marine and industrial sectors.

KEY FEATURES

- High Corrosion Resistance
- Good strength and Rigidity
- Resistance to Dezincification
- Water, Fatigue and Galling Resistance
- Stress Corrosion Cracking Resistance

CHEMICAL PROPERTIES

Copper (Cu)	Zinc (Zn)	Nickel (Ni)	Tin (Sn)	Lead (Pb)	Iron (Fe)	Phosphorus (P)
59-62%	38-41%	1-1.5%	0.2-0.8%	0.2-0.8%	0.1%	0.01%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	310-400
Yield strength (N/mm ²)	105
Elongation (% at 2 inches)	30
Hardness - Rockwell (HB)	70-85
Hardness - Vickers (HV)	100-130

PHYSICAL PROPERTIES

Density (kg/m ³)	8440	
Modulus of elasticity (Gpa)	105	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	19.5
	0-350°C (µm/m/°C)	20.7
	0-538°C (µm/m/°C)	21.7
Thermal conductivity	at 100°C (W/m.K)	102
	at 500°C (W/m.K)	70
Specific Heat 0-100°C (J/kg.K)	377	
Electrical conductivity (IACS %)	28	
Melting point (°C)	905	

MARKET SECTORS



Marine Equipment

Propeller shafts, marine fittings, valves, pumps



Marine & Shipbuilding

Hulls, piping systems, underwater equipment



Manufacturing & Engineering

Bearings, bushings, machined components



Oil & Gas Industry

Components exposed to seawater



Electrical Industry

Electrical connectors and terminals



Aerospace Industry

Missile components, hardware



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