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/mm²)	**310-400**
Yield strength (N/mm²)	**105**
Elongation (% at 2 inches)	**30**
Hardness - Rockwell (HB)	**70-85**
Hardness - Vickers (HV)	**100-130**

PHYSICAL PROPERTIES

Density (kg/m³)		**8440**
Modulus of elasticity (Gpa)		**105**
Mean coefficient of thermal expansion	0-100ºC (µm/m/ºC)	**19.5**
	0-350ºC (µm/m/ºC)	**20.7**
	0-538ºC (µm/m/ºC)	**21.7**
Thermal conductivity	at 100ºC (W/m.K)	**102**
	at 500ºC (W/m.K)	**70**
Specific Heat 0-100ºC (J/kg.K)		**377**
Electrical conductivity (IACS %)		**28**
Melting point (ºC)		**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