

OVERVIEW

MEI-61 (Naval Brass Grade 2, CuZn39Sn) provides inherent resistance to dezincification and improved strength through its tin content. Excellent hot formability and forgeability (90%) for complex marine hardware forgings and valve components.

CHEMICAL COMPOSITION (wt. %)		ALLOY DESIGNATIONS		COIL / SHEET SPECIFICATIONS	
Element	Composition (%)	Standard	Designation	Specification	Range
Cu	59.00 – 62.00	IS	IS 291	Thickness (mm)	0.3 – 25.0
Sn	0.50 – 1.00	JIS	C4640	Width (mm)	≤1250
Pb	≤0.20	ISO	CuZn39Sn	Length (mm)	≤2500
Fe	≤0.10	ASTM	C46400	Form	Sheet / Plate
Zn	Rem.	BS	—		

MECHANICAL PROPERTIES — typical values at 20°C

Temper	Condition	Tensile MPa (min)	Elong. % (min)
Hot Rolled & Annealed	O	345 / 50	35
Hot Rolled	H20	380 / 55	30
1/4 Hard	H01	480 / 70	10
Cold Rolled & Annealed	O50	430 / 62	25

PHYSICAL PROPERTIES — annealed temper at 20°C

Density (g/cm³)	Elec. Conductivity (% IACS)	Thermal Conductivity (W/m·K)	Modulus of Elasticity (GPa)	Specific Heat (J/kg·K)
8.41	26	116	103	375

FABRICATION PROPERTIES

Fabrication Property	Rating	Fabrication Property	Rating
Soldering	Excellent	Seam Weld	Fair
Brazing	Excellent	Butt Weld	Good
Oxyacetylene Welding	Good	Cold Working Capacity	Fair
Gas Shielded Arc Welding	Fair	Hot Forming Capacity	Excellent
Coated Metal Arc Welding	Not recommended	Forgeability Rating	90%
Spot Weld	Good	Machinability Rating	30%

CORROSION RESISTANCE

MEI-61 Naval Brass is highly resistant to dezincification, greatly inhibiting seawater corrosion at higher-than-normal temperatures. Resistant to wear, fatigue, galling and stress corrosion cracking. Excellent hot formability. Main applications in seawater environments including marine hardware, valve stems and propeller shafts.

TYPICAL APPLICATIONS

• Precision shipboard equipment	• Pressure vessels, condenser plates and heat exchanger plates
• Valve guides, valve stems and marine hardware	• Decorative fittings, turnbuckles and baffle plates