

# Naval Brass (C46400)

## TYPICAL USES

C46400 Naval Brass is made up of 60% copper, 40% zinc with 1% tin alloy. The addition of tin allows for superb corrosion resistance in fresh water and seawater, as well as other mildly aggressive environments. This brass also offers strength combined with an excellent hot formability.



### CONTACT US

360 Sheldon Drive  
Cambridge, ON N1T 1A9  
519-622-7900  
barstock@bearingbronze.com

GET A QUOTE

# Naval Brass (C46400)

## TYPICAL USES

Product Category	Product	Reason
Builders Hardware	Lock Pins	Corrosion Resistance, Wear Resistance, Strength
Electrical	Precision Shipboard Equipment	Electrical Conductivity, Thermal Conductivity, Corrosion Resistance, Formability, Moderate Strength
Fasteners	Bolts	Appearance, Corrosion Resistance, Formability, Wear Resistance
	Nuts	Appearance, Corrosion Resistance, Moderate Strength
	Rivets	Corrosion Resistance, Formability, Moderate Strength
Industrial	Aircraft Turn buckle Barrels	Corrosion Resistance, Formability, Galling Resistance, Wear Resistance, Fatigue Resistance, Moderate Strength
	Balls	Thermal Conductivity, Corrosion Resistance, Formability, Galling Resistance, Wear Resistance, Fatigue Resistance, Moderate Strength
	Bearings	Rubber Adhesion, Corrosion Resistance, Wear Characteristics, Wear Resistance, Machinability, Moderate Strength
	Bushings	Corrosion Resistance, Galling Resistance, Wear Resistance, Moderate Strength
	Condenser Plates	Corrosion Resistance, Formability, Moderate Strength
	Dies, Golf Ball Production	Corrosion Resistance, Wear Resistance, Strength
	Heat Exchanger Tube	Thermal Conductivity, Corrosion Resistance, Moderate Strength
	Hub Cones	Corrosion Resistance, Formability, Wear Resistance, Moderate Strength
	Pressure Vessels	Corrosion Resistance, Stress Corrosion Cracking Resistance
	Structural Uses	Corrosion Resistance, Formability, Moderate Strength
	Valve Stems	Corrosion Resistance, Formability, Galling Resistance, Wear Resistance, Fatigue Resistance, Moderate Strength
	Welding Rod	Electrical Conductivity, Thermal Conductivity, Oxidation Resistance, Resistance to Thermal Softening
Marine	Decorative Fittings	Appearance, Corrosion Resistance, Formability, Moderate Strength
	Marine Hardware	Corrosion Resistance, Formability, Plateable
	Propeller Shafts	Corrosion Resistance, Formability, Galling Resistance, Wear Resistance, Fatigue Resistance, Moderate Strength
	Shafting	Corrosion Resistance, Formability, Wear Resistance, Fatigue Resistance, Moderate Strength
	Turn buckles	Corrosion Resistance, Formability, Wear Resistance, Moderate Strength
Ordnance	Missile Components	Corrosion Resistance, Strength
Other	Baffle Plates and Flanges	Corrosion Resistance
Plumbing	Fittings	Corrosion Resistance, Formability, Moderate Strength

### CONTACT US

360 Sheldon Drive  
 Cambridge, ON N1T 1A9  
 519-622-7900  
[barstock@bearingbronze.com](mailto:barstock@bearingbronze.com)

GET A QUOTE

# Naval Brass (C46400)

## MECHANICAL PROPERTIES

Form	Temper Code	Tensile Strength (ksi)	YS-0.5% Ext (ksi)	Elongation (%)	Rockwell B scale	Rockwell 30T scale	Shear Strength (ksi)	Torsion Modulus (ksi)	Izod (ft-lbs)	Reduction of Area (%)	Ultimate Tensile Strength in Shear (ksi)	Section Size (in)	Cold Work (%)	
Flat Products	H01	70 Typ	58 Typ	17 Typ	75 Typ	68 Typ	43 Typ					0.04		
	M20	55 Typ	25 Typ	50 Typ	55 Typ	55 Typ	40 Typ					1		
	O50	60 Typ	28 Typ	45 Typ	58 Typ	56 Typ	41 Typ					0.25		
	O50	62 Typ	30 Typ	40 Typ	60 Typ	57 Typ	41 Typ					0.04		
	O60	58 Typ	25 Typ	49 Typ	56 Typ	55 Typ	40 Typ					0.25		
Flat Products & Rod	O60	58 Typ	25 Typ	49 Typ							40 Typ	0.24		
	O60	56 Typ	25 Typ	47 Typ					60 Typ	40 Typ	2			
	O60	57 Typ	25 Typ	47 Typ					60 Typ	40 Typ	1			
	O60	58 Typ	27 Typ	45 Typ					60 Typ	40 Typ	0.24			
Flat Products, Rod & Bar	H01	69 Typ	46 Typ	27 Typ						50 Typ	43 Typ	1	8	
	H01	67 Typ	40 Typ	35 Typ						50 Typ	43 Typ	2	8	
	H015	70 Typ	48 Typ	25 Typ						50 Typ	43 Typ	0.24	10	
	H01	70 Typ	58 Typ	17 Typ							43 Typ	0.04		
	O50	62 Typ	30 Typ	40 Typ							41 Typ	0.04		
	O50	63 Typ	30 Typ	40 Typ						55 Typ	42 Typ	0.24		
	O50	60 Typ	28 Typ	45 Typ							41 Typ	0.24		
	O50	62 Typ	28 Typ	43 Typ						55 Typ	42 Typ	2		
	O50	63 Typ	30 Typ	40 Typ						55 Typ	42 Typ	1		
Rod	H02	75 Typ	53 Typ	20 Typ	82 Typ		44 Typ					1	20	
	H02	80 Typ	57 Typ	20 Typ	85 Typ		45 Typ					0.25	20	
	H01	70 Typ	48 Typ	25 Typ	80 Typ		43 Typ					0.25	10	
	H01	69 Typ	46 Typ	27 Typ	78 Typ		43 Typ					1	8	
	H01	67 Typ	40 Typ	35 Typ	75 Typ		43 Typ	5.7 Typ	32 Typ			2	8	
	O50	63 Typ	30 Typ	40 Typ	60 Typ		42 Typ					1		
	O50	62 Typ	28 Typ	43 Typ	60 Typ		42 Typ					2		
	O50	63 Typ	30 Typ	40 Typ	60 Typ		42 Typ					0.25		
	O60	58 Typ	27 Typ	45 Typ	56 Typ		40 Typ					0.25		
	O60	56 Typ	25 Typ	47 Typ	55 Typ		40 Typ					2		
	O60	57 Typ	25 Typ	47 Typ	55 Typ		40 Typ					1		
	Rod & Bar	H02	75 Typ	53 Typ	20 Typ						45 Typ	44 Typ	1	20
		H02	80 Typ	57 Typ	20 Typ						45 Typ	45 Typ	0.24	20

## CHEMICAL PROPERTIES

	Element				
	Cu(1)	Pb	Sn	Zn	Fe
Min (%)	59.0		0.50		
Max (%)	62.0	0.20	1.0	Rem	0.10
(1) Cu + Sum of Named Elements 99.6% min.					

## FABRICATION PROPERTIES

Machining Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Not Recommended
Spot Weld	Good
Seam Weld	Fair
Butt Weld	Good
Capacity for Being Cold Worked	Fair
Capacity for Being Hot Formed	Excellent
Forgeability Rating	90
Machinability Rating	30

### CONTACT US

360 Sheldon Drive  
Cambridge, ON N1T 1A9  
519-622-7900  
barstock@bearingbronze.com

GET A QUOTE