

Inweld Naval Bronze

Alloy 470 UNS/CDA C47000
 AWS A5.27 RBCuZn-A
 AWS A5.8 RBCuZn A
 ASME SFA5.27 Class RBCuZn-A
 ASME SFA5.8 Class RBCuZn-A
 QQ-R-571C, MIL-R-19631B Type RCuZn-A
 MIL-B-7883 QQ-B-650



Description and Applications:

Inweld Naval Bronze is commonly called Naval Brass. Many years ago this alloy was known as “Tobin Bronze”. It contains 1% Tin (Sn) which improves the strength and corrosion resistance of the weld deposit. Inweld Naval Bronze is used in brazing applications or the oxyfuel gas welding (oxyacetylene) process on steel, cast iron, malleable iron, copper-bronze and nickel alloys. It is often used on ship or boat repairs for it’s ease of use and color match. TIG welding can be done but in most cases Naval Bronze is not used with this process. Parameters for the TIG process are given below. When brazing with Naval Bronze, the joint clearance should be 0.002” to 0.005” wide. Use a boric acid or borax commercial flux before and during brazing or welding. Preheating may be desirable for some applications. A neutral or slightly oxidizing flame should be used.

Chemical Composition of Naval Bronze RBCuZn-A

Cu	Zn	Al	Pb	Sn	Total Other(s)
57.0-61.0	Balance	0.01	0.05	0.25-1.00	0.50

Single values are maximum unless otherwise specified.

Approximate Melting Temperature: 1650 F (899 C)
 Average As-Welded Brinell Hardness: 70-90
 Tensile Strength: 50,000 psi (345 MPA)



Recommended Welding Parameters: Inweld Naval Bronze is not available in spool form, therefore GMAW is not applicable.

	Wire Diameter	Voltage*	Amperage*
GMAW (DCRP – Electrode +)	“		
100% Argon or a 75 – 25%	“		
Argon / Helium mixture	“		
.	“		
.			
GTAW (DCSP – Electrode -)	1/16“	70-120	70-150
ACHF using 100% Ar or He	3/32“	120-160	140-230
2% Thoriated, 2% Ceriated or	1/8“	170-230	225-320
2% Lanthanum Tungsten Electrode	5/32“	220-280	175-300
.	3/16“	280-330	200-320

*Use low range for iron or nickel-based alloy’s, middle range for bronze alloys and high range for copper.