

Product Information Sheet

ISSUE A

ALLOY CA 104

A. W. Fraser Alloy CA 104 is a continuous cast nickel aluminium bronze (NAB) with similar chemical composition to alloy DTD 197A

CA 104 is widely used for marine applications having superior corrosion resistance to marine conditions, high strength, good wearing and erosion resistance. Corrosion resistance can be further enhanced by annealing of the components [675 °C (1250 °F) for 6 hours minimum followed by air cooling] before being put into service.

The composition of A. W. Fraser alloy CA 104 is strictly controlled as are the casting conditions. Alloy CA 104 products are manufactured using the latest continuous casting technology.

ALLOY CA 104 - NICKEL ALUMINIUM BRONZE

SUMMARY OF PROPERTIES

Chemical Composition - percent

Element			Nominal
Aluminium	Al	8.8 - 10.0	9.6
Iron	Fe	4.0 - 5.5	4.8
Nickel	Ni	4.0 - 5.5	5.0
Manganese	Mn	3.0 maximum	0.4
Tin	Sn	0.1 maximum	
Lead	Pb	0.03 maximum	
Zinc	Zn	0.50 maximum	
Copper	Cu	Balance	

Mechanical Properties [Typical]

Yield Strength	280 MPa (40,500 psi)
Ultimate Tensile Strength	700 MPa (101,500 psi)
Elongation	15%
Typical Hardness	170 BHN

Continuous Cast

Specific Gravity	7.6
Machinability Rating (Free Machining Brass=100)	50
Max. Operating Temperature	260°C (500°F)
Stress Relieving Temperature	316°C (600°F)
Time at Temperature	1 hour per 25mm of section thickness

Comparative Specifications

BS1400 - AB2; DTD 197A, AS1565 C95810*; ASTM B505, B271 - C95800*; JIS H5121 - CAC703C (A1BC3)*;

DIN 1714 - G-CuAl10Ni*; ISO 1338 - CuAl10Fe5Ni5 ; BS EN 1982 CuAl10Fe5Ni5*

*Similar but not identical