

# Product Information Sheet

ISSUE D

## ALLOY AB2

A. W. Fraser Alloy AB2 is a nickel aluminium bronze (NAB) conforming to the requirements of B.S. 1400 - 1985 alloy AB2.

AB2 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.

AB2 is suitable for gears with heavy loads and slow speeds and having good lubrication and alignment.

The composition of A. W. Fraser alloy AB2 is strictly controlled as are the casting conditions. Alloy AB2 products are manufactured using the latest continuous and centrifugal casting technology.

### ALLOY AB2 - NICKEL ALUMINIUM BRONZE

### SUMMARY OF PROPERTIES

#### Chemical Composition - percent

Element			Nominal
Aluminium	Al	8.8 - 10.0	9.5
Iron	Fe	4.0 - 5.5	4.8
Nickel	Ni	4.0 - 5.5	5.0
Manganese	Mn	3.0 maximum	
Tin	Sn	0.1 maximum	
Lead	Pb	0.03 maximum	
Zinc	Zn	0.50 maximum	
Copper	Cu	Balance	

#### Mechanical Properties [Typical]

	Continuous Cast	Centrifugal Cast
Yield Strength	280 MPa (40,500 psi)	260 MPa (37,500 psi)
Ultimate Tensile Strength	700 MPa (101,500 psi)	680 MPa (98,500 psi)
Elongation	15%	15%
Typical Hardness	170 BHN	160 BHN
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; 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