

# Product Information Sheet

ISSUE A

## ALLOY UNI 5275

A. W. Fraser Alloy UNI 5275 is a high strength nickel aluminium bronze also known as CuAl11Fe4Ni 4

Alloy UNI 5275 is a heavy duty, dense, high strength alloy with hardness equal to manganese bronze and excellent resistance to seawater corrosion and fatigue.

This alloy has good wearing qualities and is suitable for elevated temperature use. It exhibits good shock and high stress qualities making it suitable for heavy duty, high shock and high impact applications, bearings, worm gears and helical gears.

The composition of A. W. Fraser alloy UNI 5275 is strictly controlled as are the casting conditions. Alloy UNI 5275 products are manufactured using the latest continuous casting technology.

<b>ALLOY UNI 5275 - NICKEL ALUMINIUM BRONZE</b>	<b>SUMMARY OF PROPERTIES</b>
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### Chemical Composition - percent

Element	Nominal
Aluminium Al	10.0 - 11.5 10.5
Iron Fe	3.0 - 5.0 4.2
Nickel Ni	3.0 - 5.5 4.5
Manganese Mn	3.5 maximum <0.2
Copper Cu	78.0 - 84.0
Total Impurities	0.2 maximum

### Mechanical Properties [Typical]

Yield Strength	300 MPa
Ultimate Tensile Strength	680 MPa
Elongation	12%
Typical Hardness	200 HB
Shear Strength	331 MPa
Compressive Strength (10% Set)	827 MPa
Impact Strength (Izod)	18 J
Impact Strength (Charpy Keyhole)	14 J
Fatigue Strength (10 <sup>8</sup> cycles)	214 MPa
Specific Gravity	7.53
Machinability Rating (Free Machining Brass=100)	50

### Continuous Cast

### Comparative Specifications

UNS 95500; ASTM B505 - C95500; EN 1982 - CuAl10Fe5Ni5 \*; DIN 1714 CuAl10Ni \*

\* Similar but not identical