

# Product Information Sheet

ISSUE A

## ALLOY 643

A W Fraser Alloy 643 is an aluminium silicon bronze conforming to the requirements of AS1567 – C64300 and is available as extruded rod or tube.

Alloy 643 is typically used for valve stems, valve guides, marine hardware, gears, valve bodies and high strength fasteners. It has excellent corrosion resistance and very good forging and hot working properties.

### ALLOY 643 - ALUMINIUM SILICON BRONZE

### SUMMARY OF PROPERTIES

#### Chemical Composition - percent

Element			Nominal
Copper	Cu	Remainder	
Aluminium	Al	5.5 – 7.5	7.0
Silicon	Si	1.5 – 3.0	2.0
Nickel	Ni	0.25 maximum	
Iron	Fe	1.0 maximum	
Manganese	Mn	0.5 maximum	

#### Mechanical Properties [Typical]

Yield Strength	350 Mpa
Ultimate Tensile Strength	628 Mpa
Elongation	30%
Typical Hardness	80 Rockwell B

#### Extruded and Drawn

Specific Gravity	7.7
Machinability Rating (Free Machining Brass=100)	60
Hot working	Excellent
Cold working	Poor

#### Comparative Specifications

AS 1567 – C64300, \*ASTM B150 – C64200

\* similar but not identical