

Product Information Sheet

ISSUE B

ALLOY CuZn25Al5

A. W. Fraser Alloy CuZn25Al5 is a high strength manganese bronze or high tensile brass conforming to the requirements of JIS H5102 - HBSc4.

Alloy CuZn25Al5 has exceptional strength, good wearing properties and good ductility, but has poor machinability. It is suitable for extra heavy duty slow speed bearings with good lubrication and for hydraulic cylinder components.

Alloy CuZn25Al5 has reasonable corrosion resistance but may be susceptible to dezincification under certain conditions.

The composition of A. W. Fraser alloy CuZn25Al5 is strictly controlled as are the casting conditions. Products are manufactured using the latest continuous and centrifugal casting technology.

ALLOY CuZn25Al5 - MANGANESE BRONZE

SUMMARY OF PROPERTIES

Chemical Composition - percent

Element		Nominal	
Copper	Cu	60.0 - 65.0	63.0
Aluminium	Al	5.0 - 7.5	5.7
Iron	Fe	2.0 - 4.0	3.0
Manganese	Mn	2.5 - 5.0	3.5
Nickel	Ni	0.5 maximum	
Tin	Sn	0.2 maximum	
Lead	Pb	0.2 maximum	
Zinc	Zn	Balance	

Mechanical Properties [Typical]

Yield Strength
Ultimate Tensile Strength
Elongation
Typical Hardness

Continuous Cast

460 Mpa (67,000 psi)
780 Mpa (113,000 psi)
15%
210 BHN

Specific Gravity
Machinability Rating (Free Machining Brass=100)
Max. Operating Temperature
Stress Relieving Temperature
Time at Temperature

8.2
8
260°C (500°F)
260°C (500°F)
1 hour per 25mm of section thickness

Comparative Specifications

AS1565 C86300; ASTM B505, B271 - C86300; SAE 430B*; BS1400 - HTB3*; DIN 1709 - CuZn25Al5*;

* Similar but not identical